

The Only Weekly Mining Paper in the Union and Rhodesia.

# THE South African MINING JOURNAL

WITH WHICH IS INCORPORATED  
"The South African Mines, Commerce & Industries."

ESTABLISHED 1891

PUBLISHED EVERY SATURDAY

VOL. XXV. PART II. No. 1295.]

JOHANNESBURG, TRANSVAAL, SATURDAY, JULY 22, 1916.

[WEEKLY, PRICE 6D.]

W. L. SAUNDERS, Chairman of Board.

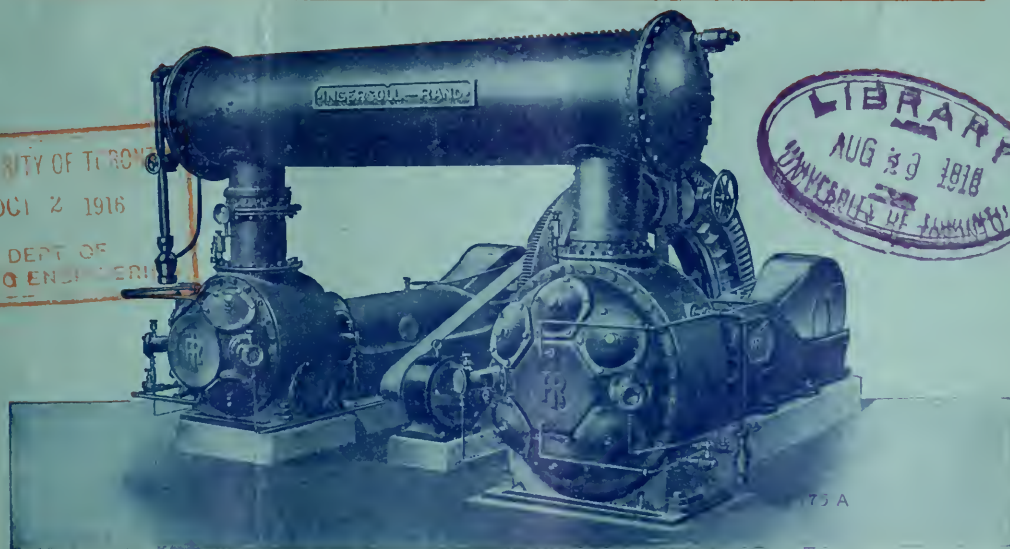
GEORGE DOUBLEDAY, President.

W. R. GRACE, V.-P. and Treas.

F. A. BRAINERD, Secy.

J. H. JOWETT, Gen. Sales Mngr.

## ELECTRIC AIR COMPRESSORS



CLASS PRE-2.

An Internal Self Oiling, Direct Connected, Electrically Driven, Automatically Controlled Compressor, Equipped with Ingersoll-Rogler Plate Valves. Built Duplex or Compound in capacities from 2,000 to 10,000 cu. ft. per minute.

**INGERSOLL - RAND CO.,**  
**EXPLORATION BLDGS. JOHANNESBURG.**

# ROBERT HUDSON & SONS, LIMITED.

P.O. Box 5744.

'Phone 1731. JOHANNESBURG. Tel. Add.: "RALETRUX."

(WORKS:—GILDERSOME FOUNDRY, Near LEEDS.)

MANUFACTURERS OF  
Tramway Material for Mines, Plantations, etc.

U-Shape  
Tip Trucks  
for  
Underground  
Use  
For Carrying  
Quartz.



V-Shape  
Tip Trucks  
and  
Side Discharge  
Trucks  
For Surface  
Work.

A. 387.—PATENT V-SHAPE DOUBLE SIDE TIP TRUCK (for Mining use).

STEEL WAGONS FOR GOLD AND DIAMOND MINES.

HOPPER WAGONS from ONE to FORTY TONS CAPACITY.

STEEL TUBS FOR COLLIERIES.

WAGONS FOR SUGAR-CANE PLANTATIONS.

SELF-OILING WHEELS AND AXLES. -- BEARINGS.

LIGHT LOCOMOTIVES.

Steel Rails. - Accessories. - Steel Sleepers.  
Points and Crossings.

Prices and Specifications  
on application.

Stocks held at—  
Durban, Delagoa Bay, Beira, Johannesburg, Salisbury, etc.

Rhodesian Agents:—P. PEECH & CO., Salisbury, Rhodesia.

HEAD OFFICES: 82, 83, 84, Cullinan Building, Johannesburg.



# WHY HOLD UP ANY OF YOUR PLANT FOR HOURS IN SPLICING BELTS?



The  
"CLIPPER"  
will make any  
width of belt  
endless in  
a few minutes.

"CLIPPER" BELT LACING makes an ideal hinge joint far more pliable than the belt itself. The "Clipper" hooks are made from a special steel wire, of an analysis that combines great tensile strength with rigidity and wearing qualities, capable of standing a strain of over 400 lbs. per inch on single belts, and more on double belts. These smooth, bright wire loops bearing upon the rawhide pin, make a joint not only pliable and strong, but SAFE.

The "Clipper" Lacings are so SAFE that the American Safety League has just awarded the

SAFETY GOLD MEDAL  
to the "Clipper."

CAN OUR REPRESENTATIVE CALL AND GIVE YOU A DEMONSTRATION?

## JOHN TULLIS & SON, Ltd.

BELTING SPECIALISTS,

18, Troye Street,

## JOHANNESBURG.

Box 3524.

Phone 5903.

Rhodesian Agents: ARNOLD BROS., Salisbury.



**"INDUSTRY AS USUAL."**

LIST OF

**Manufacturers & Agents belonging to the British Empire, her Allies & Friends.****HERBERT AINSWORTH,**

Engineer and Merchant, 304-307, The Corner House, Johannesburg, South African Agent for Green's Patent Fuel Economisers, Kennicott Water Softeners, Wood's Colliery Plants and Winches, Hart's Lambeth Cotton Ropes, Canadian Carbide, "S" Brand.

**EDGAR ALLEN & CO., LIMITED,**

5, New Club Buildings, Loveday Street, Johannesburg. Miner's Drill Steel, High Speed Steel, Engineer's and Smith's Tool Steel, Tappet Key and Gib Steel, Manganese and Hard Steel Grizzly Bars, Tube Mill liner Bars, Skip Wheels, Truck Wheels and Axles, Shovels, Hammers, Shoes and Dies, etc.

**BARTLE & CO., LTD.,**

Loveday House, Johannesburg. 'Phones 3553-4. Sole Agents for Sanders Bros. & Newbould, Ltd., Sheffield; F. Reddaway & Co., Ltd., Manchester; Henry Pooley & Son, Ltd., Birmingham; John Shaw, Ltd., Sheffield; J. W. Roberts, Ltd., Leeds; Gimson & Co., Ltd., Leicester; T. Lister & Co., Ltd., Brighouse; John Davis & Son, Ltd., Derby; Unity Safety Fuse Co., Scorrier; F. Bartle and Sons, Carn Brea; and many other well-known British Manufacturers.

**BATES, MASON & CO., LTD.,**

Machinery Merchants, Box 1895, 'Phone 2807, Government Square, Johannesburg, have large stocks of mining machinery, agricultural and building material, etc., new and second-hand, for sale cheap. Buyers of all classes of machinery and buildings for cash.

**BRITISH GENERAL ELECTRIC CO., LTD.,**

Corner Loveday and Anderson Streets, Johannesburg. Electrical Plant and Supplies of all descriptions. 'Phones 4242, 4243; Telegrams, "Current"; Box 4406. Branches at Capetown, Durban, Bulawayo, etc.

**HUBERT DAVIES & CO.,**

Electrical and Mechanical Engineers, for all kinds of Electrical Machinery and Supplies. Johannesburg, Durban, Capetown and Salisbury (Rhodesia).

**The Denver Rock Drill & Machinery Co., Ltd.**

'Phone 1426. Box No. 2367. 1-5, Royal Chambers, Johannesburg. "WAUGH" Air Feed Hammer Drills, for all classes of mining; DENVER Brand of Rubber Conveyor Belting; Rock Drill and Water Hoses, Red Sheet Packing, Grey Insertion; "DUXBAK" Waterproof Leather Belting and Waterproof Cement; "CLARK" Air Meters. Large Stocks always on hand.

**FRASER & CHALMERS, LTD.,**

Corner House, Johannesburg; also representing Holman Bros., T. and W. Smith, Ltd.; Tangyes, Ltd.; G. and J. Weir, Ltd.; and many other British agencies

**HADFIELDS LTD.**

(Incorporated in England).

46-47, Cullinan Buildings. 'Phone 5900, Johannesburg. Cast Steel Gyrating and Jaw Crushers and Crusher Spares, Wheels and Axles, Pedestals, Rollers, Pulleys and General Steel Castings.

**HARVEY & RUSSELL, LTD.,**

96, Frederick Street, Box 2043, Telephone 4004, Johannesburg. Power Transmission Machinery, Dewrance's Steam Fittings and White Metals, Machine Tools, "Rigby" Steam Hammers, Steel Construction Work, "Vielok" Patent Lock Nuts.

**HOSKEN & CO., WM.,**

Mining Material Merchants, Hosken's Buildings. P.O. Box 667. 'Phones 4113-9, Telegrams: "Hosken," Johannesburg. Agents for "Hydromax" New Water Hammer Drills. The fastest rock drill in the world.

**ROBERT HUDSON & SONS, LIMITED,**

Works: Gildersome Foundry, near Leeds. 83-4, Cullinan Buildings. 'Phone No. 1731. Telegraphic Address: "Rafetrux." Manufacturers of all classes of Light Railway Material for Mining and Contractor use. Rails in all weights per yard. Switches and Crossings, Standard Trucks of various capacities kept in stock.

**INGERSOLL-RAND CO.,**

Exploration Building, Johannesburg. Air Compressors, Rock Drills, Hose, Steel, Pneumatic Tools, Cameron Pumps, Leyner Drill Sharpeners, Davis Calyx Coil Drills.

**PHOENIX FOUNDRY,**

Iron and Brass Founders, General Engineers and Blacksmiths. Office and Works: Hay Street, Ophirton. P.O. Box 3031, Johannesburg. 'Phone 1641. Sole Agents for Carntyne Steel Castings Co., Glasgow. Stocks of Tappets, Skip Wheels, Heads, etc. Casting Specialities: Pipe Fittings, White Iron Pump Spares and Tube Mill Liners.

**REUNERT & LENZ, LTD.,**

Consolidated Building (3rd Floor), Johannesburg; P.O. Box 92; Telephone No. 3061. Sole Agents for North British Locomotive Co., Ltd.; Leeds Forge Co., Ltd., Babcock and Wilcox, Ltd.; Belliss and Morcom, Ltd.; Davidson and Co., Ltd.; Frank Pearn and Co., Ltd.; "Atlas Rock Drills," John Stephens and Son, Ltd.; E. and W. Lucas, Ltd.; Sir Joseph Jonas, Colver and Co., Ltd.; John Spencer and Sons, Ltd.; and many other high-class British Manufacturers.

**SANDYCROFT LIMITED,**

Works: Chester, England. Offices, 63-64, Standard Bank Chambers, Telephone No. 360, P.O. Box No. 1976, Johannesburg. Suppliers of Stamp Battery Requisites of all descriptions, Belting, Winches, Ropes, etc.

**FATTI'S S.A. MACARONI FACTORY,**

Suppliers of Soup Macaroni to the Mines, etc. (for the Natives). This pleasing, nourishing and economical new food is much appreciated by Mine and Compound Managers, as they find in it an opportune change of the somewhat monotonous diet of the Mine Boys! Box 1139. 30-32, Jeppe Street, Johannesburg. 'Phone 962. (L. FATTI and Co., Ltd.)

**S. SYKES & CO., LTD.**

Southern Life Buildings, Johannesburg. Telephone No. 2190. P.O. Box 2303. Telegrams: "Psyche." Sole Agents for Robey & Co., Ltd., Crossley Bros., Ltd., E. R. & F. Turner, Ltd., Worthington Pump Co., Ltd., C. A. Parsons & Co., Ltd., Crompton & Co., Ltd., and Reyrolle & Co., Ltd.

**E. W. TARRY & Co., Ltd., Austral Iron Works,**

Corner of Anderson and End Streets. Box 1098. 'Phones 149 and 626, Johannesburg. Iron and Brass Founders and General Engineers. Machine Cut Gears in Raw Hide and any Metal a speciality, and in Cast Iron up to 18 feet diameter. Sole Manufacturers and Agents for Tregaskis Patent Drill Heating Furnace.

**WADE & DORMAN, LTD.,**

Box 2997; Telephone 1460, Johannesburg. Structural Steelwork of all kinds. Large Stocks of Joists, Channels, Angles, Tees, Plates, Chequered Plates, etc. Agents for British Steel Piling Co. Stockyard and Works: 217, Main Street.

**C. F. WIENAND,**

Commercial Exchange Buildings, Johannesburg; 'Phone 3, Sole Agent for Toledo Steels of all classes, Butterley Iron, Barwell's Bolts, Scott's Ropes, Mine Lubricants, Ltd., Stelastatic Tyres. All highest quality.



## PROFESSIONAL DIRECTORY.

### LITTLEJOHN & WHITBY,

ASSAYERS TO THE  
AFRICAN BANKING CORPORATION,  
NATIONAL AND NATAL BANKS.

CONSULTING ANALYTICAL  
CHEMISTS AND METALLURGISTS.

P.O. Box 849.

'Phone 1633.

Office and Laboratories:

24, SIMMONDS STREET, JOHANNESBURG.

Assays and Analyses of all Minerals, Drugs, Foods, Water,  
Milk, Oils, etc., undertaken.

Experiments conducted. Reports made as to the treatment of  
any class of Ore.

### J. GOULDIE, C. & M.E., M.I.M.E., CONSULTING ENGINEER.

*Late Manager to the De Beers and other Diamond Mines.  
30 years practical experience in Diamond, Gold, Coal, and  
Metalliferous Mining in South Africa, and holder of Mine  
Manager's Certificate (First Class).*

Mines and Mineral Propositions Inspected and  
Reported Upon.

Office: 62, Standard Bank Chambers, Commissioner St.,  
JOHANNESBURG.

Phone 2225. Telegraphic Address: "Edlong, Johannesburg."

Code: Imperial Combination and A.B.C. (5th edition).

Reference: The National Bank of South Africa, Limited, here  
and in London

### PATENTS AND TRADE MARKS.

#### D. M. KISCH & CO.,

(C. H. M. KISCH—A. L. SPOOR).

ESTABLISHED 1874.

Members Chartered Inst. of Patent Agents, London.

#### COLONIAL AND FOREIGN PATENT AGENTS.

*The Firm undertake the Patenting of Inventions, and the  
Registration of Trade Marks throughout the world; the  
Preparation, Revision or Amendment of Specifications  
and Drawings; reporting on Validity and Infringements;  
obtaining copies of Specifications and Drawings of  
Patents granted; Searches through the Patent Office  
Records; the conduct of Oppositions, and all other  
matters relating to Patents and Trade Marks.*

No. 16 to 19A, NATIONAL MUTUAL BUILDING,  
CORNER OF RISSIK AND MARKET STREETS

P.O. Box 688.

TELEPHONE No 774.

### J. E. MILLS DAVIES, CONSULTING MINING ENGINEER.

180, Stock Exchange Buildings, Johannesburg.

P.O. BOX 418. TEL. ADD.: "MINING JOURNAL." TELEPHONE 913.

### W. HOLMAN JAMES, M.E. (S.A.) M. (S.A.) I.E.E.

CONSULTING ELECTRICAL & ELECTRO-CHEMICAL ENGINEER.

17, 18 & 27, National Bank Buildings,

P.O. Box 5685.

JOHANNESBURG.

Telephone 5676.

### G. A. WATSON, EXPERT COMMERCIAL PHOTOGRAPHER,

17, Hosken's Buildings, Cor. Rissik & Fox Streets,  
Box 667, JOHANNESBURG.

Photographs of all the Leading Mines on the  
Rand. Enlargements a Speciality.

Our Framing Department has all the latest  
Mouldings. Machinery a Speciality.

Printing, Bookbinding, Account Books, Tracing Cloth, Tracing Paper,  
Drawing Paper, Ferro Prussiate, Ferro Gallic, Indian Inks, Rubber Stamps  
Stationery of all descriptions, Draughtman's and Surveyor's Requisites.

### C. E. FOLKEY, Stationer & Printer.

Ask for a Quotation for Stationery or Printing.

7, MARSHALL SQUARE BLDGS., opposite main entrance Stock Exchange  
TELEPHONE 2065.

## NOTICE: To Mine Managers & Others

M. CHADWICK & CO., Scrap Metal and Rubber Buyers, are prepared to  
pay highest prices for Copper, Brass, Lead, Zinc, Cast Iron, or metal of  
any description. Lead, Zinc, White Metal in Ingots always on hand for  
sale at lowest prices. Write, send, or Telephone 5072, Box 2700, 55, Sauer  
Street. Prompt attention guaranteed. Distance no object

When communicating with Advertisers

kindly mention the

SOUTH AFRICAN MINING JOURNAL.

Cable:  
"McKECHNIE,  
WIDNES."

## McKECHNIE BROTHERS, LIMITED.

SMELTING WORKS: WIDNES, ENGLAND.

LONDON OFFICE: 11 LOMBARD STREET, S.E.

BIRMINGHAM, NEWCASTLE, MANCHESTER, LEEDS AND BRISTOL.

BUYERS OF

### COMPLEX ORES

Which contain COPPER.

COPPER-TIN ORES

COPPER-LEAD ORES.

COPPER-ZINC ORES.

Residues, Mattes, Concentrates, Precipitates.

# Engineering Works and Foundries.

ESTABLISHED 1888.

## Wright, Boag & Co.

**ENGINEERS  
AND  
FOUNDERS.**

Offices: Frederick Street.

Works: Marshall's &amp; City and Suburban Townships.

Telephones:  
1056 and 1057.P.O. Box  
545.Tel. Add.:  
"SWIVEL."

JOHANNESBURG.

**ENGINEERS  
AND  
FOUNDERS.**

**Austral  
Iron  
Works.**

Special Metal for  
wearing plates for  
Tube Mills and  
Centrifugal Pumps.

Machine Cut Gears in Raw Hide or any Metal a  
Speciality.

And in Cast Iron up to 18 feet diameter.

Sole Agents and Manufacturers of Tregaskis'  
Drill Heating Furnace.

## E.W. TARRY & Co., LTD.

Anderson and End Streets,

JOHANNESBURG.

'Phone 149.

Box 1098.

Tel. Add.: "Austral."

## MARTIN BUDD,

Landing, Shipping and Forwarding Agent.

DELAGOA BAY

P.O. Box 90.

Telegraphic Address: "BUDD."

Codes: A.B.C., A.I., Watkins &amp; Scott's.

P.O. Box 3960.

Telephone No. 877.

## BATTEN & EDGAR

The RAND BOILER, TANK,  
:: and IRON WORKS. ::

Steel Cyanide Tanks.  
Chimney Cones, Skips and all Mining Plate Work  
a speciality.

Office and Works: Albert, Gold, Durban and  
Nugget Streets, City and Suburban.

## THE GLOBE FOUNDRY, Iron and Brass Founders.

Phone 1780. — 181, Main St., Johannesburg.

### SOLE MAKERS:

Anton Truck Bearings, Candy's Stem  
Guide Bearing, Smiths Cable Clamps,  
Linda Metal.

### CONTRACTORS TO THE

Johannesburg Municipality.  
Boksburg " "  
Benoni " "  
Potchefstroom " "  
Rand Water Board.

Enquiries Esteemed, First-Class Work, Prompt despatch  
and satisfaction guaranteed

SIMPSON &amp; ALISON, Proprietors.

## Standard Brass Foundry,

BENONI,

PHONE 187.

Brass Founders and Finishers.

Castings in Gun Metal, Phosphor Bronze, Naval, Silica  
and Manganese Bronze up to 50 cwt.

Aluminium Castings for all purposes.

Makers of the well known ACID RESISTING METAL for all  
Pump parts. We guarantee this metal to be superior to any  
imported.

SUPPORT LOCAL INDUSTRIES.

WORKS AND OFFICES:

CRANBOURNE AVENUE, BENONI.

BOX  
1476.

THOS. JESSON,

PHONE  
958.

BROKER AND MACHINERY MERCHANT,

HOLDS LARGE STOCKS of R.S. JOISTS, RIVETS, FIRE-  
BATS, 7 1/2 cwt. RIGBY STEAM HAMMER, C.I. COLUMNS,  
MACHINE TOOL S. &c. ENGINEERS' enquiries invited for ALL  
Lines of Machinery

Corner MARSHALL and LOVEDAY Streets, Johannesburg.



## PLEASE NOTE.

We are the Largest Buyers of  
**SCRAP RUBBER**

In South Africa.

Enquiries solicited to our Johannesburg Buyers—

**JOHANNESBURG VULCANIZING WORKS,**

C/o Loveday & Anderson Streets, Johannesburg

Box 3912, Johannesburg.

Or direct to us—

**CAPE RUBBER WORKS,**

65, Shortmarket Street, CAPE TOWN.

Box 785, Cape Town.

Telephone 407.

P.O. Box 982.

ESTABLISHED 1893.

**ROWE, JEWELL & CO., Ltd.,**

OLD RAND FOUNDRY.

**GENERAL ENGINEERS,**

**IRON & BRASS FOUNDERS.**

Offices: West Street.

Workshops: West & Main Streets, Ferreira's Township.

## KNOXITE ANTIFRICTION METALS.

Manufactured on the spot from Virgin Metals

—in grades for ALL PURPOSES.—

For Bearings of Turbines, CRUSHERS, TUBE-MILLS, CAM SHAFTS, Skips, Trucks, Internal Combustion Engines, ELECTRICAL MOTORS, etc., etc.

We study Special and Particular Requirements and invariably satisfy!

**ALEX KNOX, 246, Fox Street, Johannesburg.**

Phone 3753.



# DICK'S BELTING.

*No Belt is a*

**DICK'S ORIGINAL BALATA**

*unless stamped every few feet  
with the Trade Mark.*

**FACTORIES: GLASGOW, SCOTLAND.  
PASSAIC, NEW JERSEY, U.S.A.**

SOLE AGENT—

**S. P. Ruthven,**

3, WINCHESTER HOUSE,

**JOHANNESBURG.**

BOX 3013.

PHONE 80.

TELEGRAMS: "BELTING."

## EXPLOSIVES

For Mining, Quarrying, Farming, Railway and Irrigation Work  
"Permitted" Explosives for Coal Mines.

### AGENTS:

**LONDON.**—CAPE EXPLOSIVES WORKS, LTD., 15, St. Swithin's Lane, E.C.

**TRANSVAAL.**—REUNERT & LENZ, LTD Box 92, Johannesburg.

**RHODESIA.**—L. R. FORBES, Box 683, Bulawayo, and Box 427, Salisbury

**KIMBERLEY.** CAPE EXPLOSIVES WORKS LTD., & E. W. TARRY & CO., LTD.

**AUSTRALASIA.**—KIRK O'BRIEN, Collins House, Collins Street, MELBOURNE.

### MANUFACTURERS of

Blasting Gelatin, Gelignites.

Ligdyn Dynamites.

"Cape Brand" Subsoil Dynamite

Fuse Igniters.

Bi-Sulphate of Soda.

Sulphuric and Nitric Acids.

Sulphur & Sulphur Lime Solution

Pure Glycerine.

Fuse, Detonators and Electric Blasting Accessories Stocked.  
Nitrate of Soda.

## CAPE EXPLOSIVES WORKS

LIMITED,

**P.O. DYNAMITE FACTORY,**

SOMERSET WEST, CAPE PROVINCE.



# THE LONDON DIRECTORY

(PUBLISHED ANNUALLY)

enables traders throughout the World to communicate direct with English

## MANUFACTURERS & DEALERS

in each class of goods. Besides being a complete commercial guide to London and its suburbs the Directory contains lists of

## EXPORT MERCHANTS

with the goods they ship, and the Colonial and Foreign Markets they supply;

## STEAMSHIP LINES

arranged under the Ports to which they sail, and indicating the approximate Sailings;

## PROVINCIAL TRADE NOTICES

of leading Manufacturers, Merchants, etc., in the principal provincial towns and industrial centres of the United Kingdom.

A copy of the current edition will be forwarded freight paid, on receipt of Postal Order for 20s.

Dealers seeking Agencies can advertise their trade cards for £1, or larger advertisements from £3.

**THE LONDON DIRECTORY Co., Ltd.**  
25, Abchurch Lane, London, E.C.

10. ESTABLISHED 1884. 10.  
THE LEADING FINANCIAL DAILY OF THE WORLD.

# The Financial News

THE FINANCIAL NEWS has the largest circulation of a financial newspaper in the World.

**ALL THE NEWS OF ALL THE MARKETS.**

Items of Important Exclusive Information are given Every Day.

**THE LATEST MARKET MOVEMENTS.**

All the prices recorded on the

## London Stock Exchange

Up-to-Date in all Financial Matters.

Most News. Exclusive Articles.

## ANSWERS TO CORRESPONDENTS.

Appear Daily, with the names of the Shares About which the inquiry is made.

**ON SALE EVERYWHERE.**

Publishing, Advertisement and Editorial Offices :

**111, QUEEN VICTORIA STREET, LONDON, E.C.**

Branch Offices : ( New York, 20, Broad Street.  
Paris, 36, bis Boulevard Haussmann. )  
TELEGRAMS—Finews. Cent. London TELEPHONES—6890 City  
(counts 2 words). (4 Lines)

**PUBLISHED DAILY IN FRENCH IN PARIS.**

# Robinson Deep, Limited.

(Incorporated in the Transvaal.)

## Declaration of Dividend No. 1 ('A' Shares).

NOTICE is hereby given that Dividend No. 1 on "A" Shares of 4s. (four shillings) per share amounting to £100,000 has been declared for the six months ended 30th June, 1916, payable on 31st August, 1916, to Shareholders of "A" Shares registered on the 6th July, 1916.

The dividend will be payable to Shareholders on the South African Register by warrants to be issued from the Head Office of the Company in Johannesburg and to Shareholders on the London Register by warrants to be issued from the London Office of the Company.

Holders of Share Warrants to Bearer are informed that they will receive payment of the dividend on presenting Coupon No. 1 either at the Office of the African Banking Corporation, Limited, 63, London Wall, London, E.C., or at the Offices of the Consolidated Gold Fields of South Africa, Limited, at 12, Rue des Pyramides (being the Paris Agents of the Company). Coupons will be payable at any time on or after 31st August, 1916, and must be left for examination at either of the foregoing addresses at least four clear days prior to payment being made.

By Order of the Board,

THE CONSOLIDATED GOLD FIELDS OF SOUTH AFRICA,  
LIMITED,

Secretaries,

per G. C. WHITE.

Head Office :

Consolidated Gold Fields Buildings.,  
Simmonds Street, Johannesburg.

19th July, 1916.

# PRICE'S CANDLES

First and Best  
for  
**Mining**  
and  
**General Use.**

Made in  
South Africa.

PRICE'S (South Africa) Limited,  
London, Cape Town, Johannesburg.





# New Goch Gold Mines, Limited.

(Incorporated in the Transvaal.)

## REPORT OF THE DIRECTORS

For the Year ended 31st December, 1915.

Submitted to the Shareholders at the Postponed Ordinary General Meeting, held on Monday, 17th day of July, 1916, at 12 o'clock noon, in the Board Room, General Mining Buildings, Johannesburg.

To the Shareholders,  
NEW GOCH GOLD MINES, LIMITED.

Gentlemen,

Your Directors beg to submit their Report on the affairs of the Company for the year ended 31st December, 1915, together with the Balance Sheet and Profit and Loss and Appropriation Accounts at that date. These are accompanied by the Reports of the Auditors and the Manager.

### CAPITAL.

The Capital remains unaltered at £550,000, in shares of £1 each, all issued and fully paid up.

### DEBENTURES.

As intimated in the previous Annual Report, the whole of the Debentures then outstanding were redeemed on the 1st July, 1915, from which date they ceased to carry interest.

### PROPERTY.

Your Property consists of an area of 149.5910 claims, of which 126.735 are on Reef and 22.856 situate north of the outcrop of the Reef Series. In addition to the above-mentioned claim areas, the Company holds two water rights, bewaarplaatsen, machine stands and other ground, as follows:—

- Water-right No. 334, equivalent to 16.3848 mining claims in area, situate 3,250 feet south of the reef in the outcrop mine.
- Water-right Nos. 307-8, equivalent to 10.29 mining claims in area, situate 3,930 feet south of the outcrop in the Henry Nourse.
- Machine stand adjacent to Water-right Nos. 307-8, in area 0.17 of a claim.
- Bewaarplaats on Water-right Nos. 307-8, in area 0.67 of a claim.
- Four mining stands on claims.
- Freehold Stand No. 261, in the Township of Jeppestown South.

### PROFIT AND FINANCIAL.

The profit from mining operations for the past year was £91,356 3s. 9d., and with the addition of sundry revenue amounting to £3,769 0s. 5d.; the gross profit totalled £95,125 4s. 2d. This, added to the credit balance of £126,362 16s. 10d., brought forward from the previous year, gives a total credit of £221,488 1s., which has been dealt with as follows:—

Dividend No. 6 of 5 per cent. ....	£27,500	0	0
Dividend No. 7 of 5 per cent. ....	27,500	0	0
Interest on Debentures .....	£55,000	0	0
Premium of 8 per cent. on £26,250 Debentures redeemed during year .....	1,075	0	11
Premium of 10 per cent. on £86,225 Debentures redeemed during year .....	2,100	0	0
Debiture Trustees' Fees for 1915 .....	8,622	10	0
Estimated Government Profits Tax for 1915 (plus amount under-estimated for 1914) .....	125	0	0
War Levy—Moitety chargeable for 1915 .....	4,336	2	3
Taxes paid to French Government .....	1,071	14	6
	28	17	8

### Revenue appropriated—

For Redemption of Debentures on the 1st July, 1915 .....	£112,475	0	0
For Expenditure on Buildings .....	1,500	0	0
	113,975	0	0
Less Sales of Machinery and Plant .....	89	10	0
Miners' Phthisis Compensation .....	113,885	10	0
English Income Tax .....	2,317	0	8
Balance, being unappropriated profit carried forward .....	302	8	8
	32,623	16	4
	£221,488	1	0

### GOLD PRODUCTION.

The Mill of 120 stamps ran for 350,023 days, and (with tube mills) crushed 363,200 tons, yielding gold to the value of £346,269 17s. 3d., equal to 19s. 0.813d. per ton. The working costs totalled £254,913 13s. 6d. (14s. 0.446d. per ton), leaving a gross profit from mining operations of £91,356 3s. 9d. (5s. 0.367d. per ton). As compared with the previous year, the yield shows a decrease of 2s. 1.025d. per ton, and the working costs a reduction of 4.271d. per ton milled.

### ORE RESERVES.

The fully-developed payable ore reserves at the 31st December last are estimated by your Manager at 668,600 mining tons of an average value of 5.51 dwts., calculated over an average width of 82 inches. In addition, there are 80,963 tons of partially-developed ore of an estimated value of 4.68 dwts. per ton. There are also 218,057 tons of developed ore of an average value of 2.83 dwts. over 49 inches, which are at present classified as unpayable.

### GENERAL.

Operations for the year 1915 show a reduction of approximately £30,000 in the working profit earned as compared with the previous period. This is due entirely to a fall of 2s. 1d. per ton in the grade of the ore milled (which gave the lowest average recovery value for any year in the history of the Company), and is attributable to some extent to the detailed faulting largely experienced in mining the lower levels of the property now being worked.

### DIRECTORS.

You will be requested to elect two Directors in place of Messrs. Leopold Albu and Arthur French, who retire in accordance with the Articles of Association, but are eligible and offer themselves for re-election.

### AUDITORS.

You will be asked to vote remuneration for the past audit and to appoint Auditors for the ensuing year in the place of Messrs. Douglas, Low and Co., who retire, but being eligible, offer themselves for re-appointment.

GEORGE ALBU,

Chairman.

Johannesburg,  
23rd February, 1916.

## New Goch Gold Mines, Limited.—continued.

## BALANCE SHEET AT 31st DECEMBER, 1915.

Dr.		At 31st Dec., 1914.	Expenditure, At 31st Dec., 1915.	Cr.
To Capital (Authorised and Issued)—				
550,000 Shares of £1 each, fully paid, as per Balance Sheet at 31st December, 1914 ... ..	£550,000 0 0			
„ 5 per cent. Debentures—				
As per Balance Sheet at 31st Dec- ember, 1914 ... ..	£112,475 0 0			
Less Redeemed during 1915 ...	112,475 0 0			
„ Share Premium Account—				
As per Balance Sheet at 31st Dec- ember, 1914 ... ..	106,250 0 0			
„ Revenue Appropriated for Re- demption of Debentures and Capital Expenditure—				
As at Dec. 31, 1914. £310,553 18 9				
Add transferred from Appropriation Account during year 1915 ... ..	113,885 10 0			
	424,439 8 9			
	530,689 8 9			
NOTE.—Expended in the annual redemption of Debentures from July 1, 1903, to July 1, 1915 ... .. £350,000 0 0				
Expended on Equip- ment and Develop- ment in excess of Working Capital provided ... ..	74,439 8 9			
	£424,439 8 9			
„ Sundry Creditors ... ..	1,080,689 8 9			
„ Unpaid and Unclaimed Dividends and Debentures ... ..	32,421 9 10			
„ Sundry Shareholders ... ..	5,861 13 3			
Dividend No. 7 of 5 per cent. on £550,000. ... ..	27,500 0 0			
„ Government of the Union of South Africa—				
Estimated Profits Tax for 1915 ...	4,286 18 6			
Estimated War Levy under Act 24 of 1915 £2,143 9 0				
Less Moiety to be charged in 1916 ... ..	1,071 14 6			
	1,071 14 6			
	5,358 12 6			
„ Balance of Appropriation Account— Amount unappropriated at 31st De- cember 1915 ... ..	32,623 16 4			
Contingent Liabilities.—				
Witwatersrand Native Labour As- sociation, Limited.—8s. per share uncalled on 602 shares ... ..	240 16 0			
Rand Mutual Assurance Company, Limited.—£4 per share uncalled on 103 shares ... ..	412 0 0			
Witwatersrand Co-operative Smelt- ing Works, Limited.—12s. per share uncalled on 930 shares ... ..	558 0 0			
Native Recruiting Corporation, Limited, Deposit Account.—10s. per native uncalled on comple- ment of 2,184 natives ... ..	1,092 0 0			
	£2,302 16 0			
	£1,184,455 0 8			
By Property ... ..	518,986 12 7			
„ Mine Equipment and Development—				
Permanent works ... ..	95,573 6 4			
Machinery and plant (less Proceeds of Sales) ... ..	376,518 14 8	Cr. 89 10 0		
Buildings ... ..	22,000 13 3			
Reservoirs and Dams ... ..	3,813 12 4			
	1,016,892 19 2	1,410 10 0		
Expenditure on De- velopment unre- deemed ... ..	62,385 19 7			
	1,079,278 18 9	1,410 10 0	1,080,689 8 9	
„ Furniture ... ..			385 7 4	
„ Live Stock, Vehicles, etc. ... ..			203 14 3	
„ Stores on hand ... ..			12,636 13 6	
„ Investments				
Witwatersrand Native Labour As- sociation, Ltd.—602 shares of £1 each, 12s. paid up, and deposit, Rand Mutual Assurance Company, Limited.—103 shares of £10 each, £6 paid up.				
Witwatersrand Co-operative Smelt- ing Works, Limited.—930 shares of £1 each, 8s. paid up.				
Native Recruiting Corporation, Limited.—29 shares of £1 each, fully paid. Deposit of 10s. each on the allotted complement of 2,184 natives (being part of the total liability under agreement of £1 per native). ... ..			2,287 8 0	
„ Sundry Debtors ... ..			1,988 8 3	
„ Payments in advance—				
Insurances, Recruiting Fees, etc.			7,345 7 5	
„ Gold in Transit—				
Balance due in respect of 97 per cent. advance of the estimated value of gold produced in Decem- ber, 1915 ... ..			17,515 0 0	
Estimated balance due on realisa- tion in respect of gold unrealised since outbreak of war ... ..			8,364 0 0	
			25,879 0 0	
„ Cash on Hand				
At Bankers, on fixed deposit ... ..			26,000 0 0	
£16,000 British Treasury Bills, less discount, plus accrued interest ...			15,906 17 0	
On Current, Dividend and Deben- ture Accounts and on hand ... ..			11,132 16 2	
			53,039 13 2	
			£1,184,455 0 8	

J. V. BLINKHORN, Secretary.

GEORGE ALBU, Chairman.  
ARTHUR FRENCH, Director.

To the Shareholders,

NEW GOCH GOLD MINES, LIMITED.

We report that we have examined the above balance sheet and accompanying Profit and Loss and Appropriation Accounts with the books and vouchers of the company in Johannesburg from 1st January to 31st December, 1915, and with the accounts received from London, and have obtained all the information and explanations we have required as Auditors. In our opinion, such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the company's affairs, according to the best of our information and the explanations given to us, and as shown by the Books of the Company.

Johannesburg,  
20th February, 1916.DOUGLAS, LOW AND CO., Auditors.  
(Incorporated Accountants).



## New Goch Gold Mines, Limited.—continued.

**PROFIT AND LOSS ACCOUNT** for the Year ended 31st December, 1915.—(363,200 Tons Milled).

Dr.				Value per ton.				Cr
s	d.			s	d.			
7	6.823	To Mining	£137,415	8	2			
0	7.186	„ Sorting, Crushing and Transport	10,875	6	10	By Gold Work		
1	7.864	„ Milling	30,060	16	0	From Milling	53,594.908	£224,985 3 5
1	9.222	„ Cyaniding	32,116	4	11	„ Cyaniding	28,892.250	121,284 13 10
1	2.196	„ General Mine Expenses	21,483	4	11			£340,279 17 3
0	7.872	„ Mine Development	11,910	15	11			
0	0.804	„ Permanent Works	1,216	13	5			
0	5.072	„ Head Office Expenditure—						
		Salaries	£1,725	0	0	Less estimated additional charges for Freight, Insurance, etc., on Gold unrealised		2,124 1 6
		Directors' & Auditors' Fees	3,159	2	10			
		Exchange	997	9	0			
		General Expenses, Stationery, Printing, etc.	1,794	10	0			
			7,676	1	40			
13	11.039		252,784	12	0			
5	0.367	„ Balance carried down	91,356	3	9			
18	11.406		£344,140	15	9			£344,140 15 9
		To Balance to Appropriation Account	£95,125	4	2	By Balance brought down	£91,356	3 9
						„ Additional Revenue—		
						Rents, Commissions, etc.	3,769	0 5
			£95,125	4	2			£95,125 4 2

APPROPRIATION ACCOUNT.

To Interest Account—		By Balance at December 31, 1914	£126,362 16 10
Interest on Debentures	£1,075 0 11	.. Balance of Profit and Loss for the	
Premium on £26,250 Debentures		Year ended December 31, 1915,	
Redeemed at 8 per cent.	2,100 0 0	brought down	95,125 4 2
Premium on £86,225 Redeemed at			
10 per cent.	8,622 10 0		
Debenture Trustees' Fees, 1915	125 0 0		
	£11,922 10 11		
Government of the Union of South			
Africa—			
Estimated Profits Tax, 1915	4,286 18 0		
Plus under-estimated in 1911	49 4 3		
	4,336 2 3		
War Levy—			
Amount charged for 1915 in re-			
spect of moiety of this Com-			
pany's estimated proportion of			
Special War Levy of £500,000	1,071 14 6		
		5,407 16 9	
.. English Income Tax		302 8 8	
.. French Taxes		28 17 8	
.. Miners' Phthisis Compensation		2,317 0 8	
.. Dividend—			
No. 6 of 5 per cent. on £550,000,			
at June 30, 1915	27,500 0 0		
No. 7 of 5 per cent. on £550,000,			
at December 31, 1915	27,500 0 0		
		55,000 0 0	
.. Revenue Appropriated for Re-			
demption of Debentures and			
Capital Expenditure—			
Expended on the annual redemption			
of Debentures during 1915	112,175 0 0		
Add Expenditure on			
Property	£1,500 0 0		
Less Machinery and			
Plant Sales, etc.	59 10 0		
	1,410 10 0		
		113,885 10 0	
		188,864 4 5	
		32,623 16 4	
.. Balance to Balance Sheet		£221,488 1 0	
		£221,488 1 0	

P.O. BOX 1553.

Telegraphic Address: "AINSCO."

TELEPHONE 356.

# HERBERT AINSWORTH,

304-307, THE CORNER HOUSE (THIRD FLOOR), JOHANNESBURG.

## CRANE

FOR PRESSURES UP TO  
175 LBS.CAN BE PACKED WHEN  
OPEN.CAN BE REGROUND  
WITHOUT DETACHING.

## NAVY

UNION BONNET

REGRINDING

TESTED TO 250 LBS.

## VALVES

MADE INGLOBE, ANGLE & CHECK PATTERNS.

## "HYDROMAX"

New Water Hammer Drills to  
supersede Reciprocating Drills.

\*\*\*\*\*

The "Hydromax" weighs 80lbs.

Suitable for Stopping, Raising and Driving.

It drills 30% faster than any other drilling machine.

Low Air Consumption.

No Mine Manager can afford to neglect the economic  
merits of the

## "HYDROMAX"

The Fastest Rock Drill in the World.

\*\*\*\*\*

We have exclusively manufactured drills for thirty-seven  
years and the "Hydromax" is our crowning effort.

THE CLIMAX ROCK DRILL &amp; ENGINEERING WORKS, LTD.,

CARN BREA, CORNWALL.

WM. C. STEPHENS, Managing Director.

Agents—

**WM. HOSKEN & CO.,**

BOX 667, JOHANNESBURG.

Phones 4113/3.

Telegrams: "HOSKEN." Johannesburg.





THE SOUTH AFRICAN  
**Mining Journal,**

WITH WHICH IS INCORPORATED  
*South African Mines, Commerce and Industries.*

ESTABLISHED 1891.

VOL. XXV., PART II.] July 22, 1916. [No. 1295.

**HEAD OFFICE:** 176-180, Stock Exchange Buildings, Fox Street (2nd Floor), Johannesburg, Union of South Africa.

Telephone **913**. P.O. Boxes **963** and **418**.

Cable and Telegraphic Address: "**MINING JOURNAL**."

**AGENTS FOR GREAT BRITAIN:** Argus South African Newspapers, Ltd., Byron House, 82-85, Fleet Street, London, E.C.

**AMERICA:** Gotham Advertising Co., 95, Liberty Street, New York.

**ANNUAL SUBSCRIPTION RATES:** Oversea, £2; Union of South Africa and Rhodesia, £1 10s.; Local Delivery (Town only), £1 6s.

Copies of this journal are obtainable at all Branches and Agencies of the Central News Agency, Ltd., at all News Agents and Railway Bookstalls throughout South Africa, and at the London Agency as above.

**NOTICE.**—The postage of this issue of the *S.A. Mining Journal* is: South Africa, 1d. All other parts, 1½d.

CONTENTS.	PAGE
Notes and News	375
Topics of the Week:	
Sir Lionel Phillips on War and Mining	377
East Rand Mining Risks	378
Economic Resources of German East Africa	379
Village Main: Consulting Engineer's Report	381
A South African Lesson in German Methods	382
Geological Survey of Southern Rhodesia.—III.	383
Research and Organisation of Industry.—III.	384
Correspondence and Discussion: "De Monte Process," "H.M. Trade Commissioner and Ourselves," "Springs Township," "The Rand Selection Corporation, Ltd."	385
The Week in the Sharemarket	388
Week in Mining Material and Engineering Trades	389
Company Meetings: New Goch, Village Main, Central Mining	391

## Notes and News.

An official announcement was issued this week, to the effect that a cable had been dispatched to London stating: "The new shaft on the company's property has been located 6,000 feet west of Shaft No. 1, and sinking operations have now been started." A glance at the map shows that the location of the new shaft indicates that the mynpacht will probably be taken across the south-eastern side of the property, auguring well for Vogelstruisbult and Vlakfontein, its immediate neighbours in that direction.

\* \* \* \*

A letter has come into our hands dated far back in the month of February, 1908, before the passing of the present Gold Law, which goes to show that the evidence adduced before the Select Committee, and lately pressed

### The Far East Again.

with a view to amendment of the Gold Law, was presented to the Government before the passing of the 1908 Gold Law, and was then strongly urged as a necessity. It shows that the Law was passed with a full cognisance of the difficulties of developing the Far East Rand, the necessities for larger mynpachts, etc., so that the Government in the conditions which appertain to-day cannot claim to have been ignorant of facts in the passing of the Law of 1908, which has, undoubtedly, tied up the development of the Far East Rand for all these years. The urgency of a law to particularly meet Far Eastern development was over and over again pressed upon the Ministers of the day. This fact gives food for reflection. If, after the passing of the Law of 1908, it takes eight years to bring home to the Government the absolute necessity of passing amendments, how much longer is it going to take to pass those amendments? Another eight years? The same urgency which exists to-day existed in 1908, and it is no libel upon the Government to say that they have been sadly wanting in meeting the necessities of the case.

\* \* \* \*

### T.C.M.E. Consulting Engineer's Report.

Mr. R. C. Warriner, in his annual report on the Transvaal Gold Mining Estates, writes:—

"From the General Manager's report it will be seen that in the Central Mines area development work during the year has been of a disappointing nature, the ore exposed being on the whole of a much lower grade, while no extension of the rich pay chutes in Duke's Hill and Peach Tree have yet been discovered. The fall of 3.93 dwts. in the average grade of the ore in reserve is due to the poorer grade of ore developed during the year, and also to some considerable extent to the increase of 8.16 inches in the estimated stoping width. At Vaalhoek, although the progress during the year has been slow, owing to the flooding of the river section of the mine, still the position remains unchanged, and the indications in the river section are excellent, especially in the vicinity of the dyke. When this section of the mine is once more thoroughly re-opened and furnishing a large portion of the mill requirements, a marked improvement in grade should be noticeable. The results from Elandsdrift, it will be observed, continue promising. The future of the mine, however, depends very largely on the grade of the ore encountered in the extension of the Blow into the hill. Should the width and value of this ore body continue, it will probably be advisable to further increase the milling capacity. Especially is this true in view of the marked reduction in costs accomplished during the year, which reduction, it will be seen, the Manager largely attributes to the increased scale of production. As will be gathered from your General Manager's report, it has been the policy of the Management during the year to push prospecting work as much as possible, and in every direction where there are promising indications. The future of the Company, after a few years, largely depends upon the discovery of new payable mines in the outlying districts, or extensions of the pay chutes at present being worked in the Central area—that is, on the farm Ponieskrantz. It is therefore essential to devote much attention to this part of the work. As there are a great many different reefs throughout the entire region, all more or less mineralised and gold-bearing, the chances of finding further payable areas should be excellent, provided a sufficiently comprehensive prospecting policy is adopted. Your General Manager fully realises the importance of this, and is devoting special attention to the organisation and prosecution of this class of work."

In the review of Rand mining results contained in the report for 1915 of the Central Mining Corporation mention is made of the point that, in valuing ore reserves, and in statements of gold produced, it is the practice on the Witwatersrand to make allowance for the cost of realisation. To meet this modification the figure of 84s. per oz., or 42s. per dwt., has hitherto been used in place of the standard figure of 85s. per oz. War conditions have now raised the realisation charges by 1s. per oz., thus reducing the mine valuations of the gold produced to 83s. per oz. or 415s. per dwt. For the sake of uniformity, however, the former basis has been adhered to in the compilation of the figures above mentioned. The effect of the present procedure is, of course, to decrease the apparent yield, and this now becomes accentuated. To their October returns the Langlaagte Estate and Randfontein Central Companies added an intimation that to allow for war charges the gold will be taken at 83s. 2d. per ounce. The increased outlay under this heading has been dealt with in various ways by different companies, and will require to be borne in mind in any close comparison of results.

\* \* \* \*

The Patents Act of 1907 with the Act of 1914 and rules made thereunder—after the war had begun—are said to be responsible for the following present grievances according to "Journ. Soc. Chem. Ind.," February 29, 1916: (1) The Comptroller of the British Patent Office has not apparently the power to refuse acceptance of any application for a British patent, even although a patent for the identical invention may have been granted and published years before in a foreign country. (2) Any German desiring to appropriate a British invention for which a British patent has been granted to a British inventor, may do so in the following circumstances: Supposing the British inventor applies within 12 months for a patent in Germany for his invention, his application may be successfully opposed there on one ground or another and a decision issued in circumstances such that the British applicant cannot secure a hearing. In the case of an opposition to a British application of a German subject, proceedings are postponed to the end of the war. (3) Under the 1907 Patents Act, anything known or unknown for which a patent is applied in this country, however impracticable (for which a British patent specification has not been filed in the British Patent Office Library during 50 years before the date of application), is entitled to British patent protection—51 years anticipation does not count. It is urged that in the revision of our patent system (foreshadowed recently by Mr. Runciman, the President of the Board of Trade), there should, among other things, be included: (1) A real search to insure novelty and validity, before any application for a patent be entertained. (2) No patent to be granted unless novel or practicable. (3) The entire abolition of all renewal fees. (4) The extension of the period for each patent from 14 to 17 years. (5) Some form of a guarantee for a bona fide inventor. (6) Simplified court procedure in patent cases, so as to limit the heavy expense of patent litigation. Moreover, in the formulation of any new patents Act, inventors, engineers and business men should be called into consultation more than patent counsel, lawyers and patent agents, as has hitherto been the case, which is a desideratum in any country.

\* \* \* \*

Writing in mid week, the *Financial News* says: "There is very little change to record in the Diamond world. The market continues active and strong, and America is a keen buyer for all qualities suitable for that market. As announced last week, the Diamond Syndicate are showing their first Jagersfontein shipment next week, and we are informed that applications for sights are very numerous. Diamond shares have again attracted attention on the part of investors. De Beers especially have been in demand, and a further enhancement in prices is regarded as probable in the near future, which will presumably be reflected in the shares of the other producing concerns. Our Capetown cor-

respondent cables us that the De Beers intend working the Bultfontein and Wesselsfontein mines on a more extensive scale, and as these properties produce only white stones, which are at the moment the only class of goods in demand, this seems to be the correct policy, provided the De Beers bear in mind that the market will only take a certain amount, and do not over-produce. We are also informed, although we cannot give it as definite information, that the De Beers and their allies (the Diamond Syndicate), intend to raise prices by a further 5 per cent., in order to meet the new export tax. Bearing all this in mind, Diamond shares are thought to look attractive at their present low levels."

\* \* \* \*

The position of the Netherlands Bank of South Africa improved sufficiently in 1915 to permit the payment of 4 per cent., which is the rate distributed for the four years preceding the war. The board states that during the last few months of the year the position of affairs in South Africa showed a gradual improvement. A comparison of the amount of the liquid assets of the bank with the amount of investments as at December 31, 1915, shows that there still prevailed a lack of opportunity for sound and profitable employment of the bank's funds in South Africa; but, owing to the revival of business in general, this was not so marked in the latter part of 1915. This gradual revival of business is indicated by the increases of £17,000 in advances, £7,000 in remittances and bills discounted, and £8,000 in the amount of bills for collection. The establishment of three new branches in the Transvaal contributed to this improvement. The net profit for the year, including £500 brought forward, was £12,700, which goes against £10,200 for 1914.

\* \* \* \*

The statement of the Union accounts for the first quarter of the financial year appears in the last *Gazette*, and is chiefly interesting for the light it throws upon the progress of the new Union Five Per Cent. Loan. A Treasury announcement issued a few days ago showed that the total amount applied for by the public, presumably up to the end of June, was £3,544,900, and the number of applications had been 2,426. But of these applicants, 384 were holders of Treasury Bills, who took advantage of the terms upon which the Five Per Cent. Loan was issued to transfer their holdings into the local stock, the total amount of such conversions being £1,191,650. This leaves a total of new applications to the amount of £2,353,250, which may be regarded as a very satisfactory figure. It should be emphasised that applications are still being received, and that before the lists are closed a very much larger yield may be anticipated. We gather from the *Gazette* statement that the actual amount of stock now registered under the loan is £6,063,192. Some three millions of this amount represents the conversion of Treasury Bills held by the Public Debt Commissioners, who, it will be remembered, took up in a similar manner a large amount of the Union loan raised two or three years ago.

\* \* \* \*

The report of the Barrett Gold Mining Company for the year ended February 29, shows a profit of £251, which reduced the debit balance standing to that account to £12,005. The following tonnages were mined and milled during the year: Rautenbach's, 24,437 tons; red ground deposits, 19,929 tons; Suzerain, 1,225 tons; a total of 45,591 tons, dry weight, which is the largest annual tonnage yet handled, and is an increase of 8,975 tons over last year. The yield was 4,026ozs. fine gold, which is estimated to realise £16,838, after allowing for the unusually heavy charges now existing in connection with realisation. The costs were 6s. 9½d. per ton, or a reduction of nearly 1s. per ton upon last year, which more than counterbalanced the slight fall in the average values. At Suzerain Mine, the open workings were cleared and the mine put into good working order, the existing tramways connected up and brought into active operation towards the



close of the year, but so far the value of the ore sent down for treatment had not reached expectations. The manager reports that the wattle plantations are making good progress. No fresh areas have been planted during the year. All the mine requirements for timber have been supplied from the company's own property.

The report of the **Transvaal Estates and Development Company** for the year 1915 states that there is some diminution of income from interest and dividends, due to default on certain securities and to the increased rate of income tax. The net result of operations is to reduce the amount brought forward to £7,874, which will be carried forward. In regard to investments provision has been made for the addition of £13,500 to the reserve of £15,000 created last year in view of its being impossible at that time to assign any market value to the bulk of the securities. It has been thought desirable to merge with these reserves £10,000 set aside at the same time as a general provision against contingencies. The investment reserve now suffices to cover the whole of the depreciation exhibited in market prices at the end of the year, without taking into account the recovery in value that has taken place in certain items. The net results of farming operations were unsatisfactory, and it has been found necessary to make provision to the extent of £11,452 against the losses thus incurred. The conditions to which this adverse outcome must be attributed, including a disastrous drought at the critical period of the agricultural season, affected all farming operations in the northern parts of the Transvaal. A certain recovery in the value of real estate in Johannesburg has been in progress for some time past, and sales have been effected at prices which compare favourably with the figures to which the properties concerned have been written down in our books. The Native Lands Commission has made its report, the substance of its recommendations being that the Government should expropriate extensive areas of land in the Transvaal in order to add to the reserves already provided for the exclusive occupation of the native people. The areas thus recommended include the following properties belonging to the company:—Oliphants River block (185,146 acres), Normandy block (62,651 acres), three Rustenburg farms, seven Waterberg farms and 15 Bechuanaaland farms. To what extent these recommendations will be acted upon by the Government and the Parliament of the Union remains to be ascertained.

Though the developed ore reserves of the Planet-Arcurus amount to 309,145 tons, of an average **Planet-Arcurus** assay value of 12.18 dwt. per ton, in consequence of the dislocation of financial conditions by the war they cannot be turned to profitable account pending an improvement in the monetary world. The Gold Fields Rhodesian Development Company has assisted to the extent of £98,213, the loan being secured by a mortgage over the whole Planet-Arcurus undertaking. Milling by tributaries at the Planet mine—work which gives an imperfect extraction—has yielded results which are well up to the consulting engineer's calculations.

The report of the **Tati Company** for the year ended 29th February states that the profit is £1,731, as compared with £775 last year, making with the balance brought forward a total of £2,506. The directors have decided to write-off the preliminary expenses £1,695, leaving £811 to be carried forward. The whole of the properties acquired from the old company have now been transferred into the name of the Tati Company, Ltd. No land has been sold during the year, but 3,867 acres have been sold since the closing of the books. The balance of purchase price of two farms sold on instalment terms by the old company, was paid during the year, and the proceeds, £501, have been credited to land and other property account. The area held under permit of occupation has been reduced to 53,267 acres, eight farms having been given up, owing mainly to the settlers having left for active service.

## TOPICS OF THE WEEK.

### SIR LIONEL PHILLIPS ON WAR AND MINING.

His visit recently paid to the Rand by Sir Lionel Phillips enabled him to speak at the Central Mining meeting in mail week with unusual interest and authority on our industrial problems. A full report of his speech appears in another part of this issue, and our purpose here is merely to indicate the passages that strike us as the most noteworthy and apposite. Among matters of general interest and importance he mentioned that the death rate on the mines, though slightly higher than in 1914, showed a considerable decrease on former years, and there appeared every prospect in time of very considerably reducing, if not entirely eradicating, the disease of miners' phthisis. The new Phthisis Act, he admitted, would certainly involve additional outlay, but, owing to the precautions now taken in mines and the additional steps which were to be taken for combatting the trouble, he believed in a very few years the amount of suffering and the great outlay involved might be reduced to quite small proportions. As a matter of general interest, he mentioned also that the gold output of the world in 1915 was £97,000,000, of which the Transvaal contributed £38,627,000, or about 40 per cent. The mines in which the Central Mining people were associated produced gold to the value of £14,840,000, equal to 37½ per cent. of the whole Transvaal output. This was the same proportion as for last year. Their contribution towards the dividends of the Witwatersrand goldfields amounted to 50 per cent. of the whole. In discussing the prospects of the Crown Mines in depth, Sir Lionel said: "It may interest shareholders to know, if they have not read his admirable papers, that Dr. Mellor, the Government Geologist, does not support the theory of gradual impoverishment of the beds of the Witwatersrand, although he appears to think that at greater depths the gold may be more concentrated in special channels." From that, it was but a step to the question of the Far East Rand, in regard to which Sir Lionel had some very valuable advice to offer. As representing the opinion of one who is not only himself a financial authority, but is also in daily touch with the best financial opinion in the heart of the Empire, the value of the views of Sir Lionel can hardly be exaggerated. Having regard to the great risk involved in opening up ground on the Far Eastern Rand, he declared he regarded the value of virgin soil as of very small moment compared with the large outlay required for testing it. "According to the latest scientific information, we may expect to find in that region sections of highly payable ground, and sections almost, if not entirely barren. A great deal of that country is overlain by dolomite formation, which, as everyone knows, harbours large reservoirs of water. The cost of sinking shafts there on that account may be much higher than on the Central Rand. Generally speaking, it may be said that from £800,000 to £1,000,000 has to be spent there upon a given property before any definite knowledge is secured to indicate final success or failure. Before we joined in the enterprise with regard to Daggafontein we had the advantage at least of the information supplied by one deep level shaft which had encountered the reef at a payable point. It would be folly, however, to shut our eyes to the speculative nature of deep level enterprise in that locality, good as the results have been in some instances, notably those of the Modderfontein, Brakpan and Springs areas. But there are in the neighbourhood also mines upon which large capital outlay has been incurred, and the reefs encountered without encouraging results. I mention these dormant areas now because I think it is to be regretted that the Union Parliament closed its session without amending the present law under which there does not seem much likelihood of placing them. As deep level blocks take years to bring to the producing stage the sooner the work of sinking shafts begins the better for the country." Referring to local agitation by those who advocate State industrialism, Sir Lionel said: "The Minister of Mines has announced that the Government is considering

the appointment of a Commission to investigate during the recess the feasibility of State mining. If the Union Parliament after inquiry sanctioned such a course of action we should watch its operations as large taxpayers, with attention, anxious interest and whole-hearted good wishes for its success." To that very qualified blessing, however, he added the warning: "I think that such ventures are best left to private enterprise, but the point is that about five years are required to find out whether a prize or a blank is drawn, and it is hence advisable to get a move on. I venture to point out, however, that the revenues of the State are far more benefited by the active working of mines—in Customs, railway revenues, etc., from mining machinery, supplies, and the wants of the population—than from any direct profit State ownership could bring. Moreover, private enterprise has to shoulder the burden of possible failure. The best method of dealing with such property is, I think, to get substantial people to take the risk and to do the work, naturally with an economy in their own interest not always agreeable to the advocates of State enterprise. In the event of success the State might reasonably allow them a preferential charge upon profits to cover interest on actual outlay, and then divide, in proportions to be agreed upon, any surplus profits. Unless these areas contribute there will be a serious decline in the gold output, with adverse consequences in the sphere of employment and in the annual exports and revenue of the country." It is earnestly to be hoped that these wise words will not be forgotten. Likewise the peroration containing some sound, business-like guidance for us all. "After the war, it is very difficult to foresee what effect the enormous consumption of capital and piling up of debt by the belligerent countries is going to have. An inevitable outcome will be a change in commercial conditions. It would be profitless for me to speculate upon the radical changes in commerce which may result from fiscal changes, but I feel bound to reiterate what is common knowledge among men of affairs, that the stress of life is bound to be more severe than hitherto. Changes will, no doubt demand a regeneration of industrial methods, habits and practices, and this will have an effect upon us all from the top to the bottom. But for the restoration of pre-war prosperity two paramount duties will be demanded from us all, thoroughness and hard work. Those are watchwords for all who hope to lead their fellow-men." This is the inspiring message Sir Lionel Phillips sends to us in South Africa—a message not more welcome for the end of the war than for to-day, when it grows every day more difficult for those who must stay behind to work and watch and wait!

### EAST RAND MINING RISKS.

THE objections of capitalists to the existing proposals of the Government with regard to the leasing of East Rand mining areas have largely been based upon the nature of the risk which is likely to be associated with ventures in that part of the country. So far, the records of the companies which are working along the northern fringe of the basin and to the immediate dip, seem to show that some of the richest reef areas of the Witwatersrand are located in that neighbourhood. The proof of the existence of long and moderately wide patches of profitable ore, however, has made it clear that the present prosperity may be attributed to the fact that the companies concerned have been fortunate enough to carry their development well into the richer zones. The impression appears to prevail that this streaky character of the Far East Rand in the matter of values is confined to that area, and that westwards of the great bend, to the south of the Apex, in the vicinity of the Rand Collieries and Van Dyk, a greater uniformity may be looked for. On reflection, nevertheless, it is not easy to see why a physical phenomenon of this kind should stop short at the western perimeter of the Far East Rand basin. The contours of the ore body in depth are due to earth movements which took place at a period or periods long subsequent to the laying down of the amiferous conglomerates, and therefore, according to the best informed geological theory, some time after the distribution of the gold contents in their present channels. There is, then, no reason whatever to doubt that a condition of things that has been shown to prevail in the area covered by the Government Mining Engineer's memorandum is con-

tained westwards indefinitely, in a diminishing degree, of course, but for a distance that can only be measured as investigation is carried further in that direction. The evidence of the Rand Collieries and Van Dyk is not sufficiently extensive, and is somewhat complicated by the presence of broken ground, such as might very naturally be looked for in that particular neighbourhood, but the case of these two companies was quoted by Mr. Wallers recently, before the East Rand Commission, as showing the risk which attended the employment of capital for shaft sinking, development and preliminary equipment generally in unproved areas. At the closing down of the Van Dyk in 1910 the directors referred to a report of the Consulting Engineer, in which it was stated that "although the footage driven includes a number of stretches of good grade and payable value, these have not been so continuous or numerous as to alter the position of your company to a sufficiently large extent, in respect of payable ore opened, from that of last year, as to justify the erection, as yet, of a reduction plant." In the course of his speech as Chairman at the 1912 meeting of the Rand Collieries, Sir George Alby said, with regard to the ore values: "The foregoing values serve to show that a very substantial percentage of the work effected during the year resulted in developing payable ore, and yet I feel fairly confident that we have so far been exploring the poorer zones of the mine, and that further development operations on an extended scale would result in disclosing a higher grade reef with a larger percentage of payability." The financial resources of neither of these companies were strong enough to enable them to continue operations, and both were eventually closed down. In view of this latest theory of the deposition and physical character of the conglomerates of the Main Reef zone, however, as propounded by Dr. Mellor, it is not unlikely that the more or less indefinite results obtained in the mines referred to are in some way due to the very probable extension of these features towards the west, and that further exploration may reveal the existence of zones which are sufficiently profitable and extensive to justify the hopes which are still entertained with respect to the properties. A vastly more striking instance of the petering out of fairly high values over comparatively large areas is provided by the records of the East Rand Proprietary Mines, Limited. The development operations of the past year, as the Chairman remarked at the last annual meeting, as far as values were concerned, were most disappointing. The drives, in short, have entered into a zone or zones of inferior ore, and the engineering staff have to face the necessity of carrying out a scheme of exploration which will be likely to give definite results of an improved kind at the earliest possible date. Here, again, we appear to be confronted by the operation of natural laws to the understanding of which the investigations of Dr. Mellor in the Far East Rand, in all probability, have provided a useful key. On the assumption that the method of distribution which has been shown to prevail in the Modderfontein-Brakpan area, and to have persisted at least as far as the Nigel, has found place also for some distance nearer the source in the direction of Boksburg and Germiston, there is at once a simple and reassuring explanation of those conditions which have been foreseen, no doubt, to some degree, but have finally asserted themselves very emphatically at the E.R.P.M. If the assumption be a reasonable one, and there is nothing to support a contrary view, there is the possibility of re-entering payable zones in due course as the inclines are carried along the dip. It is a fortunate circumstance that the policy of the company has for some time past been directed towards the providing of an adequate fund for development purposes, and there is, therefore, every justification for the hope that the exploratory schemes which have been decided upon will have gratifying results. It is a matter for regret that the development operations of the Cinelorella Consolidated are not of such a definite kind as to be of much use in confirming or throwing light upon the ore-channel theory. Future work in the whole Eastern area, however, will doubtless be largely guided by the evidence already gained in the Far East Rand basin, and since the line of inquiry has been so clearly marked out there is likely to be an abundance of data bearing upon the subject at an early period from mines where the existence of such information has possibly been disregarded or overlooked.



## ECONOMIC RESOURCES OF GERMAN EAST AFRICA.

### Mining, Railway and Labour Aspects.

(By F. A. G. PAPPE)

A short review of German East Africa is now apposite. The railway starting from Tanga has been taken up the valley of the Pangani to Moshi, on the shoulder of mighty Kilimanjaro. Thence onward it was intended to take this railway through the fertile plateaux of Meru over the Masai steppes on to Muanza on the shore of Lake Victoria Nyanza, there to meet the overland trunk road coming from Dar-es-Salaam, the capital, via Tabora, which forms the junction of the Ujiji railroad to Lake Tanganyika. All these railroads are tapping very promising agricultural tracts and pastoral areas of immense extent and possibilities. They traverse a region inhabited by numerous populous tribes, which even now form the backbone of all progress so far achieved. The outlook for commercial advancement and enterprise is so promising in this vast territory that the Government built the railways upon the most perfect plan of permanent way and bridge construction, with heavy rails and fine rolling stock, under the conviction that rapid development would follow. In the neighbourhood of Muanza, on the one hand, there is a considerable auriferous area being exploited now with good results; and on the Ujiji side we find a continuation of the Congolese copper and iron and coal formation. Our biggest railroad builder in the Congo-Katanga region considers this Ujiji railroad as "one of the coming most important arteries of Africa below the Equator." We must prepare for more than one very pleasant surprise when British enterprise is once free and at liberty to enter this field. I say this advisedly; for whatever benefit German "culture" was intended to be to the rest of the world, the German genius certainly did not contemplate the inroads or activities of foreigners into their colonies in the slightest degree. Boycott and brusque measures for the stranger in their sphere every time—no British or French firms trading in any German colonies, while quite the reverse was taking place when it came to flooding the former with the latter's stuff in ever-increasing volume. German East Africa is quite as good an asset as the British Protectorate, in fact development has been much more pronounced in the former. We all remember the rubber boom of 1910, and how millions of British money was sunk in the German plantations. Unfortunately, that money stayed there; for the immediate fall of price for the commodity precluded that peculiar species of rubber from being exploited profitably, although intrinsically valuable. But where the rubber did not pay, sisal hemp certainly will and does. It is now recognised that African East Coast sisal is the finest in the world and always a couple of pounds ahead in price of the original Yucatan variety. So we have witnessed in Eastern Africa the interesting phenomenon of an economic plant being taken from one hemisphere to another with great advantage to the development of the resulting product. There are hundreds of thousands of acres at present under sisal in German East Africa, with probably 30 to 40 modern "decorticating" establishments run by steam and oil engines and served by hundreds of miles of feeder field-railways which turn out from ten to fifteen thousand bales of fibre per month. It is impossible to "over-produce"; for the commercial needs of the world increase their requirements of hard fibres year by year. It is a well-known fact that under normal conditions of trade all these fibre establishments earn from ten to twelve per cent. clear profit. German East Africa does now and will increasingly absorb many millions of pounds' worth of cotton goods, enamelware, hardware generally, and provisions annually. The native population is numerous and progressive, and this country can grow immense quantities of cotton; for there are vast stretches of fertile plains capable of irrigation by means of the numerous existing rivers—the Pangani, Rufiji and Rovuma; and best of all, there is a native population to deal efficiently with the cultivation. It is one of the many German "dreams" to create in East Africa a source of supply for the looms of Saxony and Silesia—quite feasible too. The Uganda Railway system could be readily linked up with the Kilimanjaro line by means of a short "joint" of eighty

miles from Voi running through Taveta to Moshi. This "link" railway has been built by the military authorities since this article was written. Inter-communication of the colonies and linking up to the railways will be an important factor in local development. It will eventually mean rail connection from the Great Lake region down through the Congo, Rhodesia and the Portuguese colonies as far as Capetown, and also direct transit from the East Coast to the West over the Lobito Bay system now pushing eastward into the Katanga. Dreams like this to-day will be a reality to-morrow. The era of liberty and progress now dawning should find Africa prepared to communicate freely by a network of railways east, west, north and south. Water conservation and irrigation are indispensable factors in the future development of this part of Africa. Both can be carried out very easily in the Kilimanjaro region where glacier streams abound. By means of this ample store of water it would be feasible to irrigate more than 100,000 acres of fine land, upon which cotton and maize and beans, etc., could be grown in an excellent manner. A vast layer of splendid limestone, some of it pure felspar, extends for some ten miles between the Bura Range and the Sagalla Hills. Corunds and tourmalines have been found in this formation, which may yet on examination prove to harbour more valuable treasures. Coal and shales have been reported several times in this neighbourhood; but, so far, lack of investigation has failed to reveal anything of value. Further down towards the coast, and not far from Mombasa, there has been located an important formation of sandstone; and a small river which has its source there is heavily impregnated with saline matter. The sandstone shows in patches, and the "old red" specimens which in other countries indicate oil. A curious phenomenon is witnessed in this connection some ten miles out at sea from Mombasa Harbour, where local fishermen in their fragile outrigger canoes can follow their calling in all kinds of rough weather owing to a clearly perceptible "oil slick" which they put between themselves and the rough seas. To leeward of it all is smooth, probably owing to the submarine outlet of one of the stupendous fissures which are known to exist in the mother-rock. Evidence of these occur in the Taru Desert near Mackinnon Road Station, on the Uganda Railway, where they are found in many places filled with inexhaustible stores of water which used to supply the caravans in the old days before the railroad was built to the Lake. It is well known that petroleum exists inland in the neighbourhood of Lake Baringo, but this find has not been followed up owing to the inaccessibility of the locality. This part of Eastern Africa may in some respects be likened to Mexico, which has a tremendous volcanic backbone of vast extent and terraced chains of mountains and hills down to the sandy and semi-

**JUST PUBLISHED.**

## THE FAR EAST RAND

**A Few Notes and Some Statistics which  
Point the Way to Profitable Purchases**

(Including Coloured Map.)

BY

**SIDNEY S. KENNEDY.**

PRICE 2/- net.

To be obtained from W. E. HORTOR & Co., Ltd.  
Harrison Street, Johannesburg.



# FLOWER BRAND MAGNOLIA METAL

HAS  
CO-EFFICIENT OF FRICTION FROM 33 $\frac{1}{3}$ % TO 50%  
LOWER THAN ANY OTHER ANTI-FRICTION METAL.

**MAGNOLIA ANTI-FRICTION METAL CO., of Gt. BRITAIN, Ltd.,** 49, Queen Victoria St., LONDON, E.C.  
Sole Agents for South Africa : **FRASER & CHALMERS, Ltd.,** Johannesburg, Bulawayo & Salisbury.

arid sea-board. Whether the comparison will hold good, as far as the finding of rich stores of subterranean petroleum is concerned, remains to be proven, until capitalists will come forward and face the expense of adequate boring. This may cost a lot of money, but will, I hope, be carried out in the future—the sooner the better. Again, the scientific and systematic conservation and storage of rain-water will play a most important part in the agricultural development of the region. This can be done at comparatively small cost; for the topographical conformation and geological composition of the country lend themselves admirably to the purpose. As far as we know at present, there are no gold or silver lodes in the British part, and yet it is curious that gold-mining has become quite a paying industry in the Lake region of the German Colony not a hundred miles from the British frontier; and on the other hand we have certain knowledge of auriferous richness in the South Abyssinian province of Wollaga which marches with the British sphere in the north. Much remains to be done in the way of prospecting before the matter is settled either way, but it is curious that there should be a barren gap in between, when there is really no difference in the formation of the country. It took many years of unremitting effort and much expense to find the lodes from the old surface workings. A mineral find would be the immediate making of the colony; but whether it would remain an unmixt blessing would be another question. I personally should prefer to see a steady onward agricultural and stock development to a lurid ephemeral rise on the crest of a gold-rush. The most promising indication of coal has been proven in the Mara River district of Kavirondo near the Lake shore. The finding of a good solid measure or seam there would be of inestimable value, but more reliable searchings have to be carried on before anything definite can be said regarding it. Beyond Lake Victoria, in Uganda, we have a populous rich agricultural country which in the last twenty years has made enormous progress both as regards enlightenment of its people and cultivation of their broad acres. There is no labour question in Uganda; the people are quick-witted and diligent. Uganda and Busoga and Toro will be able to absorb in the near future an enormous amount of home-manufactured goods. They are preparing the products to sell in exchange in ever swelling volume. These portions of the Empire will be one of the premier places for the activities of the British trader, manufacturer, stock-raiser and planter. There are few places left on earth where judicious investment of capital will bring better and safer results under wholly safe and undisturbed conditions.

F. A. G. PAPE.

The best "Reef Traveller" is the *South African Mining Journal*.

## Lonely Reef G.M. Co.

The following are particulars of the output of gold from the Lonely Mine for June:—Mill ran 676 hours; crushed, 5,020 tons; fine gold recovered, 842.162ozs.; value, £3,539 15s. 4d.; slimes treated, 5,020 tons; fine gold recovered, 2,391.639ozs.; value, £10,056 13s. 7d.; total recovery of fine gold, 3,233.801ozs.; total value, £13,596 8s. 11d.; estimated profit, £5,048.

## Ohlsson's Cape Breweries.

The report of Ohlsson's Cape Breweries, Ltd., for the year ended March 31st last, makes a very satisfactory comparison, all circumstances considered, with the results achieved in the previous financial year. The profits were slightly higher for the period under review, and, but for the prudent policy which the Directors have wisely elected to follow in the future, the previous year's rate of dividend on the ordinary shares of 8 per cent., absorbing £24,000, could have been comfortably maintained, as the balance carried forward on the present occasion exceeds £30,000, comparing with £24,400 brought in a year ago. In view of the increase in the prices of all materials, in many instances to a serious extent, the higher rates of freight, and the larger demands made by taxation on the company's financial resources, the Board have determined to recommend a dividend on the ordinary shares for the past year of 6 per cent., absorbing £18,000, while they record that the irregularity in available means of transport has necessitated the holding of much larger stocks at the breweries. The profit for the past year, after providing for expenses, repairs, and maintenance of freehold and leasehold properties, and after allocating a sufficient sum in respect of bad and doubtful debts, amounted to £82,622.

## MINING EXAMINATIONS.

Study for Certificates as Mine Captains, Mine Managers, Surveyors, Mechanical and Electrical Engineers, and Engine Drivers. Private Tuition and Correspondence Lessons, where personal tuition is impracticable. Practical Mathematics and Electrotechnics. E. J. MOYNIHAN, Consulting Engineer, Cuthbert's Buildings, Corner of Eloff and Pritchard Streets, Johannesburg, P.O. Box 2061.



## VILLAGE MAIN: CONSULTING ENGINEER'S REPORT.

Mr. H. Stuart Martin, in his annual report on the Village Main Reef, writes: For the first nine months operations proceeded quite normally and satisfactorily, the average tonnage milled being 30,490 tons per month, with an average monthly profit of £22,751. At the end of September a movement of strata took place, resulting in a severe shock, which was communicated to the solid ground surrounding the vertical and incline shafts on the 9th and 10th levels. The damage was of such a character that hoisting from the lower levels of the mine was entirely suspended, and new levels had to be driven in the solid ground, together with new ore bins. The bursting of the solid ground took place in the vicinity of the area referred to in my last report, i.e., in a section of the mine where the surrounding excavated stopes had been filled with sand. The lower portion of the vertical shaft has been filled with sand, and every precaution is being taken to strengthen the main arteries of the mine. The repair work entailed by the accident occupied three months; during this period a comparatively small tonnage drawn from upper levels was milled, and a loss on current workings, amounting to £30,008 17s. 4d., was incurred. Operations at the time of writing are once again being conducted under normal conditions; it is, however, unsafe to predict continuous mining up to the full capacity of the reduction works, as frequent shocks are still to be looked for as the excavated areas become more extensive and the overlying rocks subside. The re-valuation of the ore reserve at 31st December, 1915, shows the position as follows:—Main Reef, 35,450 tons, 4'1 dwts. in value; Main Reef Leader, 280,100 tons, 8'1 dwts. in value; South Reef, 319,500 tons, 6'6 dwts. in value; a total of 635,050 tons, 7'1 dwts. in value. The remaining ore in the mine indicates a life of approximately two years, the scale of operations gradually declining as greater difficulties are met in extracting isolated bodies of ore spread over a large area. Mr. Robert Rainey resigned the management of the mine at the end of September, after being in charge of the property for fourteen years. He was succeeded by Mr. H. C. Hilton, and to both these gentlemen, together with the staff and employees, is due great credit for the manner in which the dangerous and difficult mining work has been conducted with a minimum of accident.

The Manager, Mr. H. C. Hilton, writes, *inter alia*:—Mining and Milling.—The total tonnage mined during the year was 357,032 tons, of which 15'6 per cent. was sorted out as waste, and the remaining 301,360 tons delivered to mill. Ore Reserve.—The payable ore reserve standing in the mine at 31st December, 1915, is estimated at 635,050 mining tons. The 219,000 of ore which appeared in last year's estimates, under the heading of "Partially Developed," have all been absorbed in the current estimate of payable ore reserves. Revenue and Costs.—The working revenue for the year amounted to £495,257 4s. 7d., or £1 12s. 10'091d. per ton milled. The working profit was £167,674 15s. 5d., or 11s. 1'424d. per ton. Working costs were £327,582 9s. 2d., or £1 1s. 8'667d. per ton milled. This shows a decrease of revenue of 3s. 3'001d. per ton milled, whereas the working costs are increased by 3s. 7'954d. per ton milled compared with the previous year. Earth Tremor.—As the result of an earth tremor on September 28th, a heavy fall of rock took place between the 9th

and 10th levels, causing extensive damage to the vertical and incline shafts. Repair work was taken in hand immediately, and it was found that entirely new arrangements for handling rock from the lower levels would have to be made. The 10th level station, and the ore bin from the incline to the vertical shafts, were so badly crushed that it was found impracticable to re-open them, and a new cross-cut and ore bins had to be made. Extensive repairs were also necessary to the pump columns and electric cables. Mining on a small scale was carried on from the upper levels, but the ore was of low grade, and a loss for the last quarter of the year was incurred. Hoisting from the lower levels was re-started on December 27. Several minor delays occurred after that date, but these are gradually being overcome. Several very severe earth tremors have been experienced during the past three months, and it is satisfactory that, so far, no further serious damage has been done, but it is impossible to say what may happen in the future. Every precaution is being taken to minimise the effect of future tremors by timbering and strengthening up weak places in the mine. Forecast for Current Year.—Under normal conditions, I do not anticipate any difficulty in milling 30,000 tons per month for some months to come; but, as the number of working places decreases, a falling off of tonnage will be inevitable. Now that so much of the tonnage is obtained from reclamation it becomes increasingly difficult to pick out high-grade ore; and in future, as reclamation work proceeds on the various levels, it will be necessary to start at the boundaries and work towards the shaft, taking out all payable ore of whatever value as it comes. Capital Expenditure.—There has been no capital expenditure, but sales of plant not required amounted to £6,156 10s. 10d. Staff.—I have pleasure in placing on record my appreciation of the staff for their loyalty and service, especially during the last three months, under most trying circumstances.

### Springs Mines.

The Directors' quarterly report for the period ended 30th June, 1916, shows.—Development.—The details of the quarter's development, together with a summary of the work so far accomplished, are as follows:—For quarter: Total footage, 4,971 feet; footages on reef, 3,811 feet; footage sampled, 3,805 feet; reef width, 14.20 inches; assay value, 17.30 dwts. Previously reported: Total footage, 38,173 feet; footage on reef, 22,488 feet; footage sampled, 25,690 feet; reef width, 19.97 inches; assay value, 18.35 dwts. Totals and averages: Total footage, 43,144 feet; footage on reef, 26,299 feet; footage sampled, 29,495 feet; reef width, 19.22 inches; assay value, 18.25 dwts. Of the footage sampled during the quarter, 43½ per cent. was in payable areas and averaged 24.90 dwts. over 19.35 inches. A similar analysis of the total development to date shows 51 per cent. of payable footage, averaging 25.63 dwts. over 24.12 inches. An estimate of the total tonnage indicated by development accomplished to 30th June, 1916, shows: Payable, 1,494,000 tons at 9.94 dwts.; unpayable, 1,726,000 tons at 1.92 dwts. The payable tonnage is calculated over an average assumed stopping width of 56½ inches, and represents 46.4 per cent. of the total. Equipment.—The work on the reduction plant continues to make good progress. Rand Water Board.—The Rand Water Board took 57,178,000 gallons of water during the quarter. General.—The options on 315,000 shares at par arising out of the debenture issue have been fully exercised, but 50 shares have not yet been allotted pending certain legal formalities being complied with. In order to satisfy the options exercised and to provide for the option on 55,000 shares still held by the guarantors of the loan, the registered capital of the company has been increased to £1,000,000, whilst the issued capital now stands at £944,950. to £82,622.

**COLLIERY MANAGER** desires appointment home or abroad. English and Indian experience. 15 years' management with one of largest Mining Companies in East. Accustomed to thick and thin seams. Good organiser, successful with labour. Speaks several native languages. Excellent references. Stand any climate. Box 1053. S. Davis & Co., 30, St. Swithin's Lane, London, E.C.

## A SOUTH AFRICAN LESSON IN GERMAN METHODS.

### Chief Engineer of the Victoria Falls Relates its International Financial Vicissitudes.

In the course of his inaugural presidential address before the South African Society of Engineers last Saturday evening, Mr. Bernard Price, the new president of that body, and the Chief Engineer of the Victoria Falls Power Company, Limited, dealt with the power companies' experience in dealing with certain German concerns, because, as he said, he did not think a better example could be cited of the methods which our enemies have diligently pursued in their attempt to attain supremacy in the industrial world. The Victoria Falls and Transvaal Power Company was promoted by British interests and every effort was made to raise the necessary capital in Britain. Unfortunately, these efforts failed, and in the end certain German industrial banks took up debentures on condition that the main contracts were placed in the hands of German manufacturing concerns with which they were allied. As a result the A.E.G., of Berlin, obtained important contracts on favourable terms. It was unnecessary for him to enlarge on the advantageous position in which the A.E.G. were thus placed, but he would emphasise the fact that the whole arrangement was the direct result of the German system of industrial banks, under which financial assistance rendered to an industrial undertaking such as a power company became the means of assisting German manufacturing firms. Needless to say, this initial arrangement was not continued, and as the power scheme grew and proved its worth, capital was raised in London at the rate of no less than £1,000,000 per annum and quite independently of German banks.

#### BRITISH V. GERMAN METHODS.

The A.E.G. then became faced with keen competition, but this did not deter them in their effort to secure contracts for the additional plant required. On the contrary, they at once reverted to the policy of dumping their goods at low prices. When in 1912 certain large and important contracts had to be placed, the power companies spared no pains to induce British manufacturers to oust their German competitors, but it became clear that the A.E.G. were prepared to accept the same guarantees as British firms, to undercut their competitors' bedrock prices, and to give better deliveries. It must be remembered that, although feelings of sentiment ran high to-day, no purchaser in 1912 would have been prepared to sacrifice large sums of shareholders' money in order to avert the dumping of German goods. In the end the Germans secured most of the contracts at prices largely below those offered by their British competitors. The factories of the A.E.G. had been written down to the nominal value of one mark in the books of that company. The concern had financial holdings in a number of power supply companies in Germany and other countries, which companies were forced to purchase their requirements from the A.E.G. at lucrative prices. In addition to that, the Cartel system maintained the prices charged to German purchasers at home. It was not difficult, therefore, to understand why the A.E.G. had been ready and able to dump its surplus production in foreign countries and powerful weapons would be required to prevent a repetition of such dumping after the war. It was no use talking of boycotting German products. In the long run British firms must compete on price if they were to secure the market, and that would not be easy. Speaking from impressions gained in Germany, Mr. Price emphasised, among other things the importance of the standardisation of product, and said he could not avoid the conclusion that in this branch of industry German competition would not be successfully combatted until British firms found a means of co-operation or amalgamation on some basis which would materially reduce the cost of production. The blame for the lack of standardisation must be shared to a considerable extent by those purchasers who made the mistake of specifying details of design or construction, which more properly fall within the respon-

sibility of the contractor. British engineers were no less skilful than their German competitors, and in his experience the merits of German design had often been considerably over-rated. He cited instances to show that although the two leading German firms were somewhat ahead of British firms as regards time, when developing electrical plant of the size and voltage required by large power schemes, they made many mistakes, and had still to acquire much experience at the expense of their customers.

#### South African Breweries.

The Directors of the South African Breweries, Limited, recommend a final distribution of  $7\frac{1}{2}$  per cent. on the ordinary shares and  $2\frac{1}{2}$  per cent. on the preference issue. The company is repeating its disbursements of the previous financial year, and that the outlook is not regarded as discouraging may presumably be assumed from the fact that the present dividend on the ordinary shares of 1s. 6d. per share follows an interim distribution of 1s. per share announced last November. The disbursement in cash amounts to £72,395, not an inconsiderable sum to be able to pay away as the result of profits realised in such adverse times.

## RAND KLIP, LIMITED.

(INCORPORATED IN THE TRANSVAAL.)

### NOTICE TO SHAREHOLDERS.

NOTICE IS HEREBY GIVEN that the Sixteenth Ordinary General Meeting of Shareholders in the Company will be held in the Board Room, Fourth Floor, National Bank Buildings, Simmonds Street, Johannesburg, on Wednesday, the 27th day of September, 1916, at 12 noon, for the following purposes, namely:—

1. To receive and consider the Statement of Account and the Reports of the Directors and the Auditors for the year ended 30th June, 1916.
2. To confirm the appointment of Capt. J. P. Farrar, D.S.O., as a Director, in place of Mr. C. P. Marais, resigned.
3. To elect two Directors in place of Mr. J. Andrew Cohen and Capt. J. P. Farrar, D.S.O., who retire in terms of the Company's Articles of Association, but, being eligible, offer themselves for re-election.
4. To appoint Auditors for the ensuing year, and to fix the remuneration of the retiring Auditors, Messrs. Douglas, Low and Co. and F. W. Diamond and English,
5. To transact all such other business as may, under the Articles of Association, be transacted at an Ordinary General Meeting.

By Order of the Board,

GEO. W. AUSTIN,

Acting Secretary.

Head Office: National Bank Buildings,  
Simmonds Street, Johannesburg (P.O. Box 1083),  
20th July, 1916.



## THE GEOLOGICAL SURVEY OF SOUTHERN RHODESIA.—III

## Detailed Report of the Director for the Year 1915.

**Alluvium.**—In the Umgauza valley two distinct deposits of older alluvium were separated by Mr. Macgregor. The lower of these beds is a brownish clay, containing scattered pebbles and a good deal of calcareous matter, often in the form of rod-like secretions. A unio-like mollusc and hippopotamus were the only animal remains discovered. The upper bed is typically of a reddish-brown to yellow ochre colour, and is very much more sandy than the clay beneath, whilst coarse gravels are of frequent occurrence, particularly at its base. No fossils were found in this alluvium, but stone implements of the "boucher" type were taken from a fallen mass of the gravelly variety. The lower bed is seen to be over forty feet thick, the upper one more than eighty, and where seen in conjunction the upper bed is unconformable on the lower. A third type of alluvium, consisting of white sand or gravel very similar to that found in the bed of the river at the present day, was also noticed, and may be the last phase of deposition of the upper bed mentioned above. All these beds are well developed in that part of the Umgauza valley where the river flows over the Forest Sandstone until it comes down stream to a bar of basalt, which appears to have determined a local base level during the various cycles of erosion and deposition. It was found that the first two types occupy distinct troughs which cross each other and that of the present stream, which has incised its bed to form a gorge fifty to eighty feet deep in the floor of the valley. It is thus possible to establish three periods of erosion and two of deposition in this valley, and in view of the relations described above, it becomes clear that during the periods of erosion the river bed was reduced to base level with reference to the basalt bar down stream, while in the periods of deposition it developed a more even gradient. Mr. Macgregor gives good reasons for believing that these cycles were caused by changes of climate. The periods of deposition seem to point to moister periods when vegetation held most of the rain as it fell and the rivers flowed perennially in beds of even gradient, whilst the intervals of erosion indicate stormy periods of comparative drought, like that of the present day, when the river beds were deepened to local base levels related to rock bars. So far as may be seen at present, the geological history of the country from the beginning of the secondary era is that of a land surface having a comparatively dry climate, varied by periods of relative humidity and of desert conditions. During the last of these moister periods palæolithic man inhabited the country.

## REPORT ON A FOSSILIFEROUS DEPOSIT ON THE BULAWAYO WATERWORKS RESERVE.

A deposit containing numerous fossil mammalian bones was accidentally discovered by the contractors engaged in heightening a dam on the Bulawayo Waterworks Reserve during the latter part of 1915. The site lies east of the wall of the upper reservoir on nearly level ground surrounded by knolls of the Hillside syenite, and is 30 feet above the level of the valley floor. After preliminary clearing, measurement, photographing and trenching that portion of the deposit remaining intact was carefully excavated and sifted by Mr. Zealley. A large number of bones were collected, which are now being cleaned and determined. They include the bones of carnivores, antelope, swine, rodents, etc., and so far as determined at the time of writing do not include species not now living in the country. No human bones, pottery, charcoal or molluscan shells were found, though some of the stones bear evidence of human workmanship. The excavation proved the existence of a hollow about fourteen feet wide in the syenite in which two kinds of detritus occurred. The lower part is a pebbly wash six to eight feet thick, consisting of decomposing felspar grains derived from the syenite and pebbles of quartz, banded ironstone, agate, etc., some of which are waterworn. It lay directly on the irregular floor

of syenite and nearly filled the hollow. Upon this the bones were accumulated. The upper stratum, which also forms the matrix in which the bones are embedded, is a red loam of the kind which would be formed by the thorough decomposition of the syenite. The bones are partly replaced by carbonate of lime, their preservation being evidently due to this and to the deposition of calcareous matter ("kunkar") in the matrix surrounding them. This has added considerably to the difficulty of cleaning them sufficiently for identification. The antiquity of the bones is indicated by the degree of fossilisation, but apparently it does not ante-date the appearance of man in this country.

H. B. MAUFE, Director.

Geological Survey Office, Bulawayo,  
31st March, 1916.

## OIL WELL DRILLERS.

The Sakalava Madagascar Proprietary Oil Fields, Limited, wish to obtain the services of a thoroughly competent driller and assistant driller to proceed to Madagascar.

Experienced oil well drillers can be obtained from America, but before concluding agreements the Company desire to ascertain if there are any drillers resident in this country who are open for engagement.

It will be quite useless for anyone to apply who has not had a thorough experience in DRILLING FOR PETROLEUM, and who cannot produce evidence of being temperate, energetic and trustworthy.

The Company is also prepared to receive and consider applications for drilling by contract, either by those willing to supply their own plant, or to use plant supplied by the Company.

Applications to be addressed—

SECRETARY,

Sakalava Madagascar Proprietary Oil Fields, Limited,  
71, Standard Buildings, Johannesburg.

'Phone 4673.

Box 3162.

OSBORN'S  
"TITAN" MANGANESE  
CASTINGS.

Write or 'Phone for Stock List.

SAMUEL OSBORN &amp; Co., Ltd., SHEFFIELD and JOHANNESBURG.

## RESEARCH AND THE ORGANISATION OF INDUSTRY.—III.

Address by Professor Wilkinson.

The success of the synthetic industry, as has been also foreseen, would probably not stop here, and the following quotation from Professor Frankland will show this: "By varying the ingredients in the indigo synthesis, many very valuable dyes related to indigo have been obtained. Thus the chlorine and bromine substituted indigos are manufactured as ciba blue, brilliant indigo, and bromo-indigo. Again, with sulphur instead of oxygen, thio-indigo-red and thio-indigo-scarlet. Moreover, by using the anthracene grouping in the indigo synthesis, a number of the most important colours have been obtained, e.g., indanthrenes of extraordinary fastness to light; Alizarin indigo; Algal colours (Robert E. Schmidt), in all varieties of colour and of the greatest fastness to light."

The knowledge of what was being done in Germany prior to the advent of the marketing of synthetic indigo was not unknown to the Indian planters, but they were sceptical of the results, many believing that it was an impossibility to prepare the substance from coal tar, with the result that, practically speaking, they took no steps whatever to improve either the yield per acre, or the quality of their finished product. Having thus lulled themselves to sleep, their awakening in 1897, when synthetic indigo was placed on the market at a price much below that demanded for the natural substance, was somewhat of a bolt from the blue. Owing to the stress of the competition, which they at last realised would take place, they attempted some improvements, but as seen above, they were somewhat belated. It is difficult to predict with any degree of accuracy whether the natural product would have been entirely ousted, had there been no war, because tradition is hard to kill and there are dyers who prefer to use the natural dye. On the other hand there can be no doubt that the production of the latter would have been insignificant in comparison with that of the synthetic material, as happened in the previously well-known and analogous case of the dye alizarin, formerly extracted from madder root. The indigo fields would have shared the same fate as those of the madder.

The tannin industry in this Province is in a similar position to that, in which the indigo industry found itself about 1880-82. The master synthesis of tannin was effected in 1913 by Professor Emil Fischer and Dr. Karl Freudenberg, in Berlin. How this has been accomplished will be dealt with fully in a separate paper before this section. The formula of tannin is now known with a great degree of certainty, and the researches are still being continued. The next step is the commercial utilisation of this knowledge, which means the synthetic production of artificial tannin on a commercial scale from raw materials found in Germany. This, as stated above, in the case of indigo, took seventeen years' work and one million pounds in money.

The value of the tannin bark industry to Natal is approximately three hundred thousand pounds per annum, as shown in the Annual Statements of the Trade and Shipping of the Union (1912 et seq.), namely:—

### I.—AMOUNTS EXPORTED IN POUNDS.

	1912	1913	1914	1915
A. ....	62,007,314	99,203,808	92,276,358	?
B. ....	32,525,378	50,145,880	29,904,174	?
C. ....	16,072,668	8,871,278	7,156,368	?
D. ....	7,604,239	6,896,802	4,879,946	?
Total . . .	118,207,599	145,717,738	130,216,826	89,639,564

### II.—VALUE OF THE ABOVE IN £ STERLING:

	1912	1913	1914	1915
A. ....	145,304	208,192	200,172	?
B. ....	83,240	68,318	60,735	?
C. ....	35,890	17,845	13,872	?
D. ....	18,576	15,974	11,020	?
Total . . .	283,010	309,329	286,399	195,184

Exports to the United Kingdom (A), Germany (B), Australia (C), other countries (D).

The problem, which confronts the industry in this Province, is therefore how, whilst there is still time, to protect it against any competition, which might possibly arise from the presence on the market of an artificial substitute. The answer to this may be put in the form of a question. If, during the years 1880-1896, the indigo planters of India had invested one million pounds in the scientific investigation and development of their industry, would they have for one moment feared to have faced competition at the end of that period? This would have meant an expenditure to the extent of between fifty and sixty thousand pounds per annum for seventeen years, invested so as to obtain results, which would not only have made the future secure, but at the same time would also have increased the output annually during the period of the outlay. In point of fact it would in all probability have placed vegetable indigo beyond competition. Moreover, just as India was compelled to export the indigo which she grew, so also must Natal at present export her tannin bark, until the chemical industry of leather manufacture be established here, in which case the leather would be required to stand the strain of the competitive market. In passing it may be noted here that of the twenty-five large classes into which Germany officially divides material connected with chemical industry, one of the divisions is "tanning extracts" and another "dyes and dye materials."

In both these industries, the production of indigo and tannin, the problems are so very similar, that the lesson of the former should be the incentive for the latter in the superlative degree. It is oft times the wail of the profitmonger that the industry will not "stand the expense," and in annual balance sheets we look in vain for the record of investments in the future of the industry itself. The work of the botanist and chemist are the corner stones, upon which these organisations must not only be built up initially, but also must be conducted, throughout. Each must have had the highest training possible, must be thoroughly skilled in his work, thoroughly conversant with all that has been done, and must be selected for the work on these grounds, and no other. They must be provided, as far as they can be, without stint or question with all that they deem necessary for the prosecution of their investigations, and results will follow. The days of rule of thumb experience, the legacy of a former generation, are as dead as the dodo, and he, who still clings to them, will be left behind his more enlightened contemporaries as the cab horse is out-distanced by the aeroplane. The weigh scales and the magnifying glass may have been excellent tools for our great grandfathers, but we desire the micro-balanced and the ultra microscope. If in pain, we do not despise the veronal which the chemist has provided for our ease, but as yet we scorn his aid in the prosecution of our industries.

Chemical industry requires a complex organisation, beginning with the chemist, and ending with the patent agent and advertising salesman, sometimes also the machinery for running to earth patent thefts and fraudulent imitations. Its board of control should be self contained, and consist of representatives of each of the main branches, whose qualifications should be that they have specially studied their own sphere of the work, and been at the same time highly trained therein. Industrial success at the present day demands this, and illustrations of the efficiency and success thereby produced are easily obtained. The number and kind of men required will, of course, vary considerably with the particular industry, and in each case requires the exercise of much careful thought before commencing operations.

But at the outset the chemist is the most important factor in chemical industry, because it is in the first degree upon his work that the operations depend. This may seem to some a self-evident truth, but, as a chemist, I can give the assurance that it is unfortunately otherwise in most instances in this country with, of course, results which are easily foretold; in fact, this is one of the main reasons why our chemical products are not up to the standard of imported goods. Given the chemist and the problem of the industry to be undertaken, the next procedure is its complete investigation, in other words, to ascertain as much as possible of what is already known, for which access to a good technological and scientific library is required, and then to carry out, after complete analyses of the raw materials have been made, such tests on a small scale as will give some clue to the difficulties to be encountered on the large scale, for which purpose the establishment of a properly-equipped laboratory is indispensable. If these meet with success, and the industry is undertaken, the laboratory can be utilised to aid the engineer in selecting the best materials of construction, until such time as it is necessary for controlling the daily routine. At the same time it should serve as an instrument of research with a view to improving methods of daily control, methods of manufacture, and also the discovery of new methods or processes. Whether any or all of the functions be efficiently performed depends on the equipment and staff of the laboratory, but more especially on the man who is the head. Routine operations soon become, to a certain extent, standardised, and can be carried out efficiently by well-trained assistants, but research work of the beneficial kind can only be effectively performed by the head of the laboratory in touch with every phase of the manufacturing process, or by chemists specially appointed for this purpose, working independently. The value of the work done will manifest itself in the smooth working of the process of manufacture and the sales of the finished product, when compared under commercial conditions with its competitors. It will also be of great assistance to the engineer in the control of his supplies, especially fuel. It is difficult, if not impossible, to assess the value of such a laboratory in pounds, shillings and pence, but on the other hand in the few instances, where they have been installed in this country, they have rendered invaluable assistance and made for efficiency.

(To be continued.)

## JAMES WEST & CO.

CERTIFICATED MINING AND MECHANICAL ENGINEERS,  
GEOLOGISTS AND METALLURGISTS.

Consulting Specialists in all branches of Diamond Mining,  
Washing and Recovery.

Formerly of De Beers Consolidated Mines, Dutoitspan, Wessleton Mines, Kofffontein Mines, Premier (Transvaal) Diamond Mining Co., New Eland Diamonds, Ltd., etc., etc.

186, Stock Exchange,

Box 4253. Telephone 3659.

JOHANNESBURG.



**CORRESPONDENCE AND DISCUSSION.****H.M. Trade Commissioner and Ourselves.****AN UNSOLICITED TESTIMONIAL.**

To the Editor, *South African Mining Journal*.

Sir,—I beg to thank you for your courtesy in having supplied regularly, for file in this office, copies, as issued, of the *South African Mining Journal*. In view of the difficulties under which the printing and publishing trade is now working, the receipt of your Journal is the more appreciated. I trust it will be possible for you to continue the courtesy in question.—I am, etc.,

ERNEST GAUNTLETT,  
For H.M. Trade Commissioner.

Office of the Trade Commissioner  
(H.M. Board of Trade),

Norwich Union Buildings,  
St. George's Street,  
Capetown, July 12th, 1916.

**The Del Monte Process.**

To the Editor, *South African Mining Journal*.

Sir,—Can you inform me of the address of the Del Monte Coal Oil Extraction Company, which, I believe, is in England. Is there any agency or means of obtaining particulars in South Africa as to the method of treatment, kind of coal, or all kinds, and results?—I am, etc.,

F. C.

Capetown,  
July 16th, 1916.

**Springs Township.**

To the Editor, *South African Mining Journal*.

Sir,—For your information, we beg to advise you that the Administrator has granted this company's application to lay out a township on the farm Rietfontein No. 14. The township is bounded on the north by the existing Springs township, on the south by Springs Mines and on the west by the Railway. Springs railway station will serve the township. The new township will be known as "Springs."—Yours, etc.,

THE CONSOLIDATED MINES SELECTION CO., LTD. (Eng.),  
Secretaries.  
per A. F. LYALL.

**The Rand Selection Corporation, Ltd.**

To the Editor, *South African Mining Journal*.

Sir,—For your information, we beg to advise you that at an extraordinary general meeting of shareholders, held on the 18th inst., a special resolution was unanimously passed to the following effect: "That the name of the company be changed to that of the Rand Selection Corporation, Ltd."—Yours, etc.,

THE CONSOLIDATED MINES SELECTION CO., LTD. (Eng.),  
Secretaries.  
per A. F. LYALL.

P.S.—Before the resolution becomes effective it will be necessary to obtain in writing the consent of the Minister and to register the new name.

**NOW READY.**

Published July 1, 1916.

Second Year.

Contains all the latest information up  
to within a few days of publication.

THE  
**S.A. MINING  
AND ENGINEERING  
YEAR BOOK  
1916.**

By S. R. POTTER.

The Standard Reference Work on S.A. Mines.

Price 15/- net.

Post Free 17/-

478 pages. In Cr. Folio, Cloth, Gilt Letters.

Obtainable from the Office of this Paper.

— A RECOGNISED —  
**INDISPENSABLE WORK OF REFERENCE**

For Mining Investors, Mining Engineers,  
Mine Managers, Bankers, Stockbrokers,  
Solicitors or anyone interested in the Mining  
Industry.

**A RECORD OF INFORMATION** concerning Mining  
Companies operating in all parts of South Africa.  
Gold, Diamond, Copper, Tin, and other Mines,  
Collieries, Exploration, and Mining Investment Com-  
panies, arranged in alphabetical order.

**SOME PRESS OPINIONS.**

"A complete account of the present position and future prospects of South African mines, put on permanent record for ready reference."  
—"The Star."

"The only authoritative work of reference on South African mining companies produced in this country."—"Rand Daily Mail."

"To holders of Kaffir shares and prospective investors this is an aggregate of authoritative information that has a distinct value."  
—"Financial News."

**WRIGHT'S ROPES.**

## Engineering Notes and News.

### SOUTH AFRICAN INSTITUTION OF ENGINEERS: PRESIDENTIAL ADDRESS.

#### Points from Mr. Bernard Price's Survey—Review of the Position—Industrial Development and Scientific Research—Rand Power Supply.

In his presidential address to the members of the South African Institution of Engineers, delivered on Saturday evening at the Chamber of Mines, Mr. Bernard Price expressed his recognition and appreciation of the honour conferred by his election as President for the ensuing session. He devoted the first part of his address to a brief survey of the institution's position, with the object of awakening members to a keener and more active interest in the organisation and its work. In his opinion the institution is in danger of slipping downhill just at the time when it should be exerting itself to the utmost. If South Africa is to take its part in the great industrial and commercial campaign which is to follow the war, they who were technical or commercial men must throw their united strength into the fight, and it was through institutions such as theirs that they could make their united effort felt. It is now generally recognised that the commercial prosperity of a nation under modern conditions is primarily dependent on the application of science to the development of the national resources, but methods of government have often betrayed a lack of appreciation of that fact. It was a matter for deep regret that at a time when the stress of war was rousing the Empire to serious thought and bold action, progress in South Africa was so grievously hampered by disunion and racial feeling. This country, with its vast resources and enormous possibilities, deserved to be free from handicaps of that nature, and it was devoutly to be hoped that peace would bring a more enlightened and happier outlook so that the serious work of developing the country may be actively prosecuted. The establishment of new industries had been advocated for many years, but apart from mining and agriculture little headway had been made and progress had been left almost entirely in the hands of private enterprise. Mr. Price reminded members of the institution of some of the steps which had been taken by local scientific bodies in this connection, leading to the formation of a representative central committee for industrial research. That committee had already appointed its executive. It seemed to him that by a somewhat devious path a definite and thoroughly practicable method had been reached for dealing with the vital question of industrial development. He was confident that the recommendations of the committee, when they matured, would receive the sympathetic consideration of the Union Government. It was the desire of the council of the institution that the whole question of industries and industrial research should be made a special feature of the institution's procedure during this session.

#### THE INDUSTRIAL CENTRE.

The Rand to-day is the industrial centre of South Africa and is likely to remain so for a long time to come. Every possible facility should, therefore, be given to this centre to enable it properly to educate and train the youth of this country in the arts and sciences upon which future industries and the development of those already existing, will depend. It had been a surprise and disappointment to him that the Union Government should have based its policy in regard to the University question upon an outlook so narrow as to disregard the claims of this centre in the interests of South Africa's industrial progress. Dealing with domestic activities, Mr. Price emphasised the fact that the value of the institution to its members depended primarily on the work which members themselves were prepared to undertake. Their meetings had been poorly attended; they had been living from hand to mouth as regards papers and contributions to discussions; and the numerical strength of the membership had been steadily falling. Mr. Price made these facts the basis of an appeal for a quickening of interest and support.

#### THE RAND'S POWER SUPPLY.

As his subject of technical interest, Mr. Price dealt with the "Power Supply to the Witwatersrand." He gave a brief sketch of the Power Company's scheme, confining himself in the main to its general features. In one of his tables he compared the loads and outputs with similar statistics for the largest concerns in America, and this comparison showed that as regards output the Rand power companies came fourth on the list and very nearly third, while in respect of peak load they came second, unless the Ontario Power Company (for which figures were not available) had a load factor of less than about 58 per cent. The output of the Rand companies was still increasing and at present had just reached the rate of 800 million units per annum. The companies are now consuming coal at the rate of something over one million tons per annum, or roughly two tons per minute.

#### RAND'S POWER OUTLOOK.

Finally, after other remarks—dealt with in another article, Mr. Price briefly discussed the future outlook in regard to the ultimate power requirements of the Rand. "It looked," he said, "as if in ten years' time the Far East Rand may demand more power than the quantity which the worked out mines will by then have consumed. The Victoria Falls was, in his opinion, one of the most valuable potential assets of the country, and there could be little doubt that when South Africa's natural resources were actively developed it would be profitable to utilise that water power for industrial purposes. Apart from technical difficulties which might conceivably be overcome, the capital cost of the transmission lines would, in his opinion, represent an annual charge no less in amount than the cost of fuel saved. The probability that they would see the Falls electrically connected with the Rand was, he thought, remote, but he looked forward to seeing the power developed for industrial purposes on sites within an economical radius of the Falls themselves. Another development which would no doubt receive serious consideration when peace returns was the electrification of the railways in this district. The power companies had invested close upon eight millions of money in their business and they spend not far short of one million pounds annually on wages, coal, stores, and other material. It may, therefore, he thought, be justly claimed, that this undertaking materially contributes towards the prosperity of South Africa.

**NEW AND UP-TO-DATE FOUNDRY** will undertake to supply Castings of every description in Brass, Gun Metal, Phosphor Bronze, and Acid-resisting Metal. Duplicate Orders a speciality.

#### CENTRAL BRASS FOUNDRY,

49, POLLY STREET,

Quotations on receipt of particulars.

JOHANNESBURG

### FRANK E. NOTT, Private Detective.

P.O. Box 1587. 80 & 81, PERMANENT BLDGS. Telegrams: "SLEUTH."

Divorce, Slander, Watching, etc. Delicate negotiations in all parts of the world. Consultations Free.

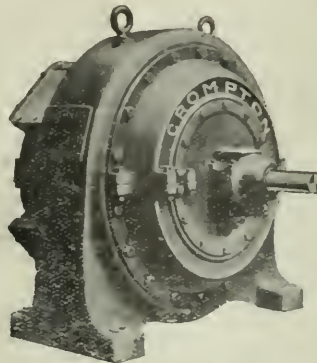


## Electric Power in Mines.

**WE** are in an exceptional position to supply and install **Complete Plants** for the **Electrification of Mines**. We have on our staff Expert Engineers who have successfully equipped and reorganised the power arrangements of some of the largest mines in the world.

**We Manufacture:**

**ALTERNATORS, DYNAMOS, MOTORS, SWITCH-GEAR, ARC LAMPS, SEARCHLIGHT PROJECTORS FOR SURFACE MINING, INSTRUMENTS, PRINTING PRESS CONTROLLERS, &c., &c.**



Write us your requirements, and we will advise you as to the best means of meeting them.

# CROMPTON & CO LTD

**SALISBURY HOUSE, LONDON WALL, LONDON,  
ENGLAND.**

**Works: CHELMSFORD, ENGLAND.**

**Agents: S. SYKES & Co., Ltd., P.O. Box 2303, Southern Life Buildings, JOHANNESBURG.**

### The British Engineers' Association.

The following communication has been issued to British engineering firms, under date June 19th, from the offices of the Association, 32, Victoria Street, Westminster, S.W. :—  
"As president and chairman of the Executive Committee of this Association, we appeal to you at a critical moment for your support and co-operation. The war is often described as an 'Engineers' War,' and there can be no question as to the vital part played by the British engineering industry. One result of the honourable, but heavy, responsibility which was thrust upon our engineers on the outbreak of war has been the inevitable dislocation of our pre-war trade and manufacture. As a consequence, the future contains serious problems which can only be solved by the ablest brains in the engineering trade. The first practical step—as in all struggles on a large scale—is mobilisation. It is notorious that neither in peace nor during the war has the British engineering industry exerted the influence to which it is legitimately entitled. The cause of this serious handicap has been the failure to combine. The disinclination to combine was due to British individualism and independence. But we would ask you to consider whether the dictates alike of patriotism and business do not call for combination on a large and effective scale in so far as it is vital to secure a national policy which will conserve and foster British engineering. If we lean on Government departments or outside helpers and advisers instead of looking after our own interests for ourselves we shall—as the past has proved—be running grave risks. We fully realise the strain and pre-occupation imposed upon you by the war, but the issues at stake are too urgent to be any longer side-tracked till 'after the war.' It is common knowledge that Germany, and, perhaps, other rivals, are preparing for a vigorous commercial campaign at our expense on the cessation of hostilities. If Germany can do this, so can we. The question is merely one of inclination. The British are the best organisers in the

world, as witness the Royal Navy and our Army of five million men. They are also the easiest people to organise, once their consent has been won, because they are a free people. The time has come for the engineering industry to show the country that it believes in organised self-reliance, and that it is prepared to maintain the supremacy of British engineering against all-comers. The first practical step towards this end is mobilisation. We, therefore, appeal earnestly to you to join forthwith the 300 firms which already belong to the British Engineers' Association, so that we may henceforward present a united front to our common enemies whoever and whatever they may be. The new members whom we hope to welcome will naturally have a say in the coming campaign; and, in order to reduce the call upon the time of busy men to a minimum, we have engaged the services of special organisers to carry out the decisions of our Council and Executive Committee. We believe that we are justified in promising you in the near future a practical return for your support, and we shall heartily welcome your criticisms and suggestions.—Wilfrid Stokes, President, J. E. Thornycroft, Chairman of the Executive Committee."

### MINING INSTITUTE.

TEACHING CENTRES: JOHANNESBURG AND WITBANK.

Prof. YATES prepares candidates for the following Government

Certificates:—

MINE MANAGER'S. MECHANICAL ENGINEER'S.  
MINE OVERSEER'S. ELECTRICAL ENGINEER'S.

by Class, Private Tuition and Correspondence.

The aggregate percentage passes for the  
combined classes is nearly 80 %

OVER 200 SUCCESSES.

St. James' Mansions, Eloff St.

## THE WEEK IN THE SHAREMARKET.

Still Dull—Government Areas Improve—Bantjes and Henderson's Options Active,

BUSINESS continues restricted, and no one quite seems to know what will be the effect of realising the German goods hitherto bottled up at Home. Had the financial wisecracks listened to the advice of the Committee of the local Stock Exchange all this scrip would have been liquidated long ago, and British investors in receipt of the profits which have accrued between then and now, in many cases amounting to 50 per cent. The main feature of the week has been the advance in Government Areas to a point above anything they have ever touched, except when they were run up at the time of issue. City and Suburbans have also proved a good, though more limited, market. Areachaps, whose nursing up was foretold last week, have put on about 8s., rising from about 16s. to 24s. The report of Springs Mines has not been favourably received. The fact that the average of the payable ore is higher than in Modder B and Modder Deeps has been more than set off by the fact that the percentage of payable ore has been reduced from 51 per cent. to 43 per cent. For the rest, there is very little change. Bantjes have been the jobbers' mainstay for the week, together with Henderson's options. Business has fallen sometimes to a turnover in only eight stocks at the Call. Main Reefs have been rather sought after at higher rates, and there has also been a slight advance in East Rands and Randfonteins. Kleinfonteins are once again on the weak side. Small goods are very much neglected, with the exception of Jupiters, of which the supply at present rates appears to be limited. On Friday morning, the opening business was practically confined to Areachaps, which were raised to 26s. The general tone on Call was weak, especially in tins, Rooibergs fetching only 10s. 9d. and Zaaipalats 8s.; Springs dropped to 15s., and Con. Langlaagte to 26s. 6d.; Bantjes, however, improved to 13s. 10d.

	Fri. 14th.	Sat. 15th.	Mon. 17th.	Tues. 18th.	Wed. 19th.	Thurs. 20th.
African Farms . . . .	8 6*	8 6*	9 0*	9 0*	8 9	8 6*
Apex Mines . . . . .	5 6*	5 6*	5 6*	5 6*	5 0*	5 0
Aurora Wests . . . . .	12 3b	—	11 9*	12 0	12 3*	12 3*
Bantjes Cons. . . . .	12 6*	12 7*	13 4	13 6	13 3	13 3
Brakpan Mines . . . .	80 6	80 0†	80 0†	77 6*	77 6*	77 6*
British S.A. . . . .	—	—	—	—	10 0*	0 7*
Bushveld Tins . . . .	0 7*	0 7*	—	—	—	—
Cassell Coals . . . . .	20 0†	20 0*	20 0*	20 0*	20 0*	—
Cinderella Cons. . . .	7 0†	5 9*	5 9*	5 9*	5 9*	5 9
City and Subs. . . . .	—	30 6*	30 6*	30 6*	—	31 3*
City Deeps . . . . .	75 0*	76 0	75 6*	75 6*	75 6*	75 0
Cloverfield Mines . . .	8 3	8 0*	8 0*	8 3*	8 0*	8 0*
Clydesdale Colls. . . .	—	—	10 6*	—	—	10 0*
Concrete Construct. . .	—	4 0†	—	—	—	—
Con. Investments . . .	—	15 0*	—	15 0*	14 0*	14 0*
Con. Langlaagtes . . .	29 0b	27 6*	28 0*	28 3*	—	—
Con. Main Reefs . . . .	18 0*	18 0*	18 6	18 6*	—	18 9b
Con. Mines Selections .	19 0	18 0*	17 9*	18 3*	18 0*	18 6*
Coronation Freeholds .	—	—	—	0 3*	—	—
Crown Diamonds . . . .	—	—	2 0*	—	2 1*	2 1*
E.R. Centrals . . . . .	8 3*	8 3*	8 3*	8 3*	8 3*	8 6*
E.R. Coals . . . . .	3 6*	3 6*	3 6*	3 6*	3 5*	3 6*
E.R. Deeps . . . . .	1 4*	1 3*	1 3*	1 3*	1 3*	1 3*
E.R. Minings . . . . .	—	—	—	—	12 0*	—
E.R. Proprietary . . . .	12 6*	12 6*	12 9*	12 9*	13 0*	13 3*
E.R. Debentures . . . .	£72½*	£72½*	£72½*	£72½*	£72½*	£72½*
Eastern Diamonds . . .	1 6*	1 5*	1 4*	1 6*	1 6*	1 6*
Frank Smith Diams. . .	—	2 3†	1 9*	2 0	1 10*	2 0
Geduld Props. . . . .	41 6*	41 0*	41 0*	41 0*	41 3*	41 0
Glencoe Collieries . . .	6 6*	—	—	—	—	—
Goerz and Co. . . . .	—	—	—	—	13 6*	—
Govt. Areas . . . . .	37 9	38 0	38 3	38 6	38 6*	39 3
Jupiters . . . . .	7 0*	6 9*	7 0*	7 0*	—	7 6
Klerksdorp Props. . . .	2 2*	2 2*	2 3*	2 3*	—	2 5*
Knight Centrals . . . .	13 8	13 3*	13 9*	13 4*	—	12 10
Knight Deeps . . . . .	17 6*	17 6†	—	18 9*	—	18 0*
Lace Props. . . . .	5 3*	5 4*	5 4*	5 4*	5 6*	5 6*
Laupardsvlei Est. . . .	—	—	—	—	6 6*	14 3†
Lydenburg Farms . . .	7 2	6 10*	6 9*	—	6 9*	6 9*
Main Reef Wests . . . .	6 3*	6 6*	6 7*	6 7*	6 11	6 9*
Meyer & Charltons . . .	—	101 0*	—	—	—	—
Middelvlei Estates . . .	1 1*	1 0*	1 1*	1 1*	1 1	1 1*
Modder B.'s . . . . .	128 0	128 0	128 0	129 0*	129 0†	129 0†
Modder Deeps . . . . .	128 0	128 6*	—	128 0	128 0	128 6

\* Buyers. † Sellers. a Ex dividend. b Odd lots.

	Fri. 14th.	Sat. 15th.	Mon. 17th.	Tues. 18th.	Wed. 19th.	Thurs. 20th.
Leuwpoot Tins . . . .	—	13 0*	13 0*	—	14 0*	—
Natal Navig. Coals. . .	—	—	—	—	16 9*	—
National Banks . . . .	—	225 0b	—	—	—	—
New Boksburgs. . . . .	1 6*	1 7*	1 6*	1 6*	1 6*	1 6
New Eland Diams. . . .	17 0*	—	18 0*	20 0	20 0†	—
New Era Cons. . . . .	—	8 0*	8 0*	—	8 0*	8 0*
New Geduld Deeps . . .	5 1	5 0*	5 0*	5 0*	—	4 11*
New Heriots . . . . .	—	—	—	8 0*	—	—
New Kleinfonteins . . .	26 6	26 6	26 5*	26 3	26 3	25 9
New Modders . . . . .	335 0	342 6†	—	345 0a	—	—
New Rietfonteins . . .	0 9†	0 6†	—	0 9†	—	—
New Unifeds . . . . .	9 3*	9 0*	9 0*	9 0*	9 0*	9 0*
Nigels . . . . .	—	—	—	—	5 0*	—
Pickstone Mines . . . .	5 0†	—	—	—	—	97 6
Premier Def. . . . .	95 0	—	—	—	—	70 0*
Pretoria Cements . . .	68 0	—	70 0*	70 0*	70 0*	70 0*
Princess Estates . . . .	—	1 9*	1 9*	1 9*	1 9*	1 9*
Rand Collieries . . . .	3 6†	2 9*	3 6†	3 6†	3 6†	3 0*
Rand Klips . . . . .	7 10	7 9	7 9*	7 7*	7 7	7 8
Rand Nucleus . . . . .	1 9*	1 7*	1 9*	1 10	1 9*	1 9*
Randfontein Deeps . . .	4 0†	3 9*	3 10	3 6*	3 6*	—
Randfontein Est. . . . .	12 0*	12 6*	12 0*	12 3*	13 0†	13 0†
Rooibergs . . . . .	11 0*	11 0*	11 3*	11 9	11 3*	11 0*
Rooipoort Uniteds . . .	8 3*	—	8 0*	8 9	8 6*	8 6*
Ryan Nigels . . . . .	2 6*	—	2 6*	2 6*	2 6*	2 6*
Shebas . . . . .	—	2 6†	1 9*	2 6†	—	1 9*
Simmer Deeps . . . . .	—	1 10*	1 10*	2 0*	2 0*	—
S.A. Breweries . . . . .	30 0†	30 0†	—	29 0*	29 0*	—
S.A. Lands . . . . .	4 2	4 1*	4 3	4 3	4 2	4 1*
Springs Mines . . . . .	52 0	52 6	52 9	52 6	51 6	51 9
Sub Nigels . . . . .	16 0*	16 4†	16 0*	16 9	16 6	16 0*
Trans. Coal Trusts . . .	—	64 0*	—	64 6*	66 0†	64 0*
Trans. Lands . . . . .	—	16 0†	16 0†	16 0†	—	15 6†
Trans. G.M. Estates . .	26 3†	26 0†	26 3†	—	—	—
Van Dyks . . . . .	—	2 6†	—	—	—	—
Van Ryn Deeps . . . . .	67 0†	67 0†	—	—	66 0†	65 3†
Village Deeps . . . . .	—	—	28 0*	—	—	—
Village Main Reefs . . .	12 0*	17 6†	12 0*	12 0*	17 6†	17 6†
Vogel Con. Deeps . . . .	1 0*	1 1*	1 1*	1 1*	1 1*	1 2*
Welgedachts . . . . .	—	20 6†	—	—	—	—
Western Rand Est. . . .	—	1 0*	—	—	—	1 0*
Witbank Collieries . . .	40 0†	40 0†	40 0†	—	40 0*	40 0†
Witwatersrands . . . .	—	53 0†	—	51 0	—	—
Wit. Deeps . . . . .	23 6*	23 3*	23 0*	24 0†	23 3*	24 0
Woluhuters . . . . .	10 3*	10 3*	10 3*	10 6	10 3*	10
Zaaipalats Tins . . . .	8 3*	8 3*	8 6	8 6*	8 9	8 0*

## ANSWERS TO CORRESPONDENTS.

All inquiries addressed to the Editor must bear the writer's name and full address. We cannot reply to inquiries by letter, but telegrams with replies prepaid will be answered. Correspondents are requested to write their names and pseudonyms distinctly.

"Constant Reader" (Standerton).—Prospects are certainly excellent, but you can understand the reluctance of the directors to embark on any scheme of extended operations until the war is over.

"W.M." (Bulawayo).—You seem to have mixed up the name of the farm with the name of the company. The latter seems to have been finished sometime ago, though from the alluvial diggings on the former, stones are still being won.

"Guttershon" (Pilgrim's Rest).—(1) Enquiries being made. (2) Zaaipalats tin is, like every tin mine, a speculation, and we cannot attempt to explain every fluctuation in the price of the shares. Why not put your questions direct to the secretary. (3) Yes, until more development is done below the dyke. (4) Sakalavas must also, of course, remain a sheer gamble, unless and until oil is struck.

"Too Far East."—We quite agree with your letter. The prospectus is a shocking example of what you say.

"Hendersons."—Yes. The annual report and an official quotation for the options in London are now due.

"R. L. Grey" (Mazoe).—Search being made.

"N.L."—(1) No. (2) Certainly, you should hold on.



## THE WEEK IN THE MINING MATERIAL AND ENGINEERING TRADES.

### Mines Holding Somewhat Aloof—Holders Inclined to Realise Big Parcels— Safety Clause in Contracts—Working Old Dumps.

THERE is no outstanding feature, except the one of dullness. Hitherto the July month has been a good one for the mining material trade, as the mines usually come in after the June stock-taking and purchase much of their requirements for the December half-year. On this occasion they are holding aloof as regards anything resembling pronounced buying for some reasons not easy to fathom. This dullness, instead of anticipated activity, is causing some uneasiness to those merchants holding large stocks here and with Oversea commitments. Hence a quiet disposition to sell decent lines either spot or for future delivery, but ordinary lines still keep up their values and in most cases are firmer, especially for steel and iron material. Whilst no very pronounced reasons are available, yet from general remarks heard it would appear that the brighter war outlook is one of the chief reasons for the lack of buying throughout mining circles.

It has been discovered that the slump in copper values must not be taken too seriously as a guide to the metal market. It appears that the Americans had a strong hold on the copper market in the middle of May, when copper was £140 per ton on the London market, which compares very unfavourably with the present price of £88 according to the last cable advices. At that time, the Americans' and their associates' plan was to delay deliveries in Britain, and full advantage was taken of the Government restrictions as regards dealings then placed on the British metal Exchange. In past periods of inflated values, created by clever American and other manipulators, it appears that nothing but the systematic opposition of the London dealers has broken the back of any such movement. Our authority also added that it frequently happened that the American operators have "run with the hare and hounds," to the extent of being supporters of the price in New York and sellers of copper on the London Exchange.

#### A LOT OF MONEY AT STAKE.

One student of the immediate future states there is a lot of money at stake as regards stocks held and future commitments. He has noticed for some little time that there is a tendency to sell, through stocks accumulating here and the slackness of the demand, which is far below the amount of stocks arriving from Oversea. This accords with his private advices, which state that certain manufacturers cannot quote without the consent of the Ministry of Munitions. However, a very significant remark appears in his communication that some old contracts are, however, being released in order to facilitate commercial shipbuilding and the export trade. This view is supported in every particular, by the goods arriving here and our own official railway returns. These show that the tonnage recently carried is greater than in 1914, which also supports the statement at the head of this paragraph: "That there is a lot of money at stake," because this increased tonnage means very considerable increased values, for every unit of £100 in value before the war represents £150 at to-day's prices. Here it is advisable to put in a steadying factor as regards the financial aspect of the matter, and that is the mining material merchants on the whole have done well during the war period, because they turned all their stocks into cash and so created good cash reserves for future contingencies. Another steadying factor might well be added, and that is, a responsible manager, controlling big business, states that the man to make big money is the one who adopts a bold policy of still securing plenty of negotiable stocks in advance. At the moment some uneasiness has undoubtedly been created in men's minds, chiefly through the mines' small purchases as compared with their liberal operations in previous Julys. Had their purchasers been in any way active, the unsettled feeling would, obviously, have been less, if not entirely absent.

#### A SAFETY CLAUSE IN CONTRACTS.

Another sidelight in the present trade conditions is the fact that a safety, or precautionary, clause is being inserted in contracts. The intention is to control the conditions of an increase or decrease in ocean freights or coal, also if the custom duties should be altered for better or worse, and several other lesser points to-day, but perhaps important ones as the war develops.

**Iron, Steel and Hardware.**—The standard prices of rivets, washers, nuts and bolts have again been carefully revised, all of which, it is hardly necessary to remark, have advanced on our local exchange. However, the price of both local made and imported drill hammers are now the same, owing to the local article coming in as a serious competitor to the imported hammer. These latter up to recently stood at 7½d. lb., but now they are both 8½d. lb., not that it pays to sell the imported at the price, but stocks are heavy and bidders are anxious not to miss the market. This small "straw" to show which way the wind blows should not be ignored by the advocates of local industries—and who is not?—because anything made locally for the local demand of the mines has an excellent chance of coming along to stay.

**Local Industries.**—A second-hand broker states that there is quite a demand for small machines and working tools from the Western Rand, as contractors and speculators are working the dumps on the French Rand mine. What a vista opens to the imagination as to working the old original dumps, which were not treated by the very up-to-date processes of to-day. If perchance this new industry gives a living wage to white men, what opportunities there may be in store for the soldiers returning from the front. Kimberley men will remember what a good purpose the diamond dumps often served in relieving the labour pressure in that quarter.

**Chemicals, etc.**—There is a great shortage of quinine in India and prices have doubled there in consequence. Refined sulphur is now £14, as compared with £6½ before the war. Phosphoric acid has risen from £10 to £50. The supply of lime in connection with sugar refining in Natal used to be specially imported in air-tight drums from Britain, but is now supplied from the Cape Province. Caustic soda, which is very difficult to obtain, is 57s. 6d. per 100lb. as compared with the pre-war rate of 25s. 6d. Litharge was expected to be easier, as it is a lead product; but, evidently, although lead has dropped £8½ per ton in Britain, it has not altered its by-products through the shortage of labour in the lead factories. Potassium permanganate is selling at 5s. per lb. instead of 6d. as in normal times. As a substitute the mines are using chloride of lime. The price has risen in Britain from £7½ per ton to £35. Potassium of salts have fallen 35 per cent. through America coming in with supplies for South Africa.

**The Freight Question.**—The new rates have so far been accepted quite philosophically, and no doubt in due course values will be risen to some extent accordingly. So far, owing to business being dull, obviously the demand is too slack to enable rates to be put up before the new conditions come into play; that is when consignments arrive and

#### ELECTRICAL EQUIPMENT Co., 84, MARSHALL STREET (Opp. Simmonds Store L.)

"Expert Winders of Motors, Dynamos and Coils of every description. Makers of all classes of spare parts. Turning. Electrical Plants installed. Maintenance Contracts entered into, covering cost of all breakdowns, at low rates."

☎ Phone 4745.

JOHANNESBURG.

Fox 1642.

the enhanced charges actually paid. There is just one fact which should be mentioned, taken from a shipping gazette, viz., that freights had become easier on the East Coast of England through the release of the shipping from the Baltic since the recent naval battle.

#### REVISED PRICE LIST.

Approximate war prices, subject to quick change.—Mining and building hardware: Iron, imported, round up to 1 in., 30s.;  $1\frac{1}{2}$  in. to 2 in., 18s. 6d.;  $2\frac{1}{2}$  in. to 6 in., 25s. per 100 lbs. Do., square, up to 1 in., 27s. 6d.;  $1\frac{1}{2}$  in. to  $2\frac{1}{2}$  in., 13s. 6d.;  $2\frac{1}{2}$  in. to 5 in., 25s. Flats, 3-16 in., 37s. 6d.; all from  $\frac{1}{2}$  in. up, 25s. Angles,  $\frac{1}{2}$  in. to 3-16 in., 30s.;  $\frac{1}{2}$  in., 27s. 6d.; 5-16 in. to  $\frac{3}{4}$  in., 25s., excepting 5 x 4 x  $\frac{3}{4}$  in.; mild steel bar, 4d. lb.; drill, 7lb.; steel plates, 10ft. by 4ft. by 1-16th in., 35s.;  $\frac{1}{2}$  in., by 3-16in., 32s. 6d.;  $\frac{1}{2}$  in. to 5-16th in., 31s.;  $\frac{3}{4}$  in., up to 30s.; 10ft. by 5ft. by 1-16in., 36s. 6d.;  $\frac{1}{2}$  in. and 3-16in. 34s.;  $\frac{1}{2}$  in. to 5-16in., 32s. 6d.;  $\frac{3}{4}$  in., up to 31s. 6d.; intermediate sizes up to 12ft. by 6ft. by 1-16in., 37s.;  $\frac{1}{2}$  in. and 3-16in., 34s. 6d.;  $\frac{1}{2}$  in. and 5-16in., 33s.;  $\frac{1}{2}$  in. and up 32s., all at per 100lb.; hexagon and cuphead bolts,  $\frac{1}{2}$  in. diameter to 2 $\frac{1}{2}$  in., 55s., over 2 $\frac{1}{2}$  in., 5s. 6d.,  $\frac{3}{4}$  in. to 2 $\frac{1}{2}$  in., 50s., over 47s. 6d.,  $\frac{3}{4}$  in.,  $\frac{1}{2}$  in., lin. up to 2 $\frac{1}{2}$  in., 45s., over, 42s. 6d.; nuts,  $\frac{3}{4}$  in., 10d. lb.,  $\frac{1}{2}$  in., 60s.,  $\frac{3}{4}$  in.,  $\frac{1}{2}$  in., 57s. 6d., 1 $\frac{1}{2}$  in., 1 $\frac{1}{2}$  in., 62s. 6d., 2 in., up, 67s. 6d.; washers, all sizes, 45s.; rivets, 3-16in., 1s. lb.,  $\frac{1}{2}$  in., 5-16in., 10 $\frac{1}{2}$ d., 7-16in.,  $\frac{3}{4}$  in., 7 $\frac{1}{2}$ d.,  $\frac{1}{2}$  in., 45s.,  $\frac{3}{4}$  in., 42s. 6d.,  $\frac{1}{2}$  in. up, 40s. lb.; shoes and dies, 32s. 6d. to 35s. per 100lb.; rails, £23 per ton; picks, 4lbs., 27s. per dozen; shovels, 32s. 6d. to 50s. per dozen; hammers, drills, 6 $\frac{1}{2}$  lb. to 9d. lb.; hammer handles (best American), 14 in., 3s. 6d., 24 in., 5s. 6d., 30 in., 7s. 6d., 36 in., 10s. 6d. per doz.; metal, anti-friction, 1s. per lb.; galvanised iron, 24 gauge, 6 ft. to 10 ft., 10d., 11 ft. 10 $\frac{1}{2}$ d., 12 ft. 10 $\frac{1}{2}$ d.; 26-gauge, 6 ft. to 10 ft., all lengths, 8 $\frac{1}{2}$ d. to 9 $\frac{1}{2}$ d. per ft. all-round; flat galv., 18 to 24 gauge, 32s. 6d.; 26 gauge, 34s. 6d., 100 lbs.; floor brads, 30s.; ceiling, 30s.; wire nails, 30s. to 35s. per 100lb.; solder, 50 per cent., 1s. 2d. per lb.; locks, rim, 48s.; mortice, 60s. dozen; barbed wire, 22s. 6d. to 25s. 100lb. coil.

Timber: Deals, Baltic, 9 x 3, up to 16 ft., 1s.; over, 1s. 1d. to 1s. 3d. (Oregon, 11 $\frac{1}{2}$ d.); flooring, 4 $\frac{1}{2}$  x  $\frac{3}{4}$  and 6 x  $\frac{3}{4}$ , 6 $\frac{1}{2}$ d. to 6 $\frac{3}{4}$ d. per sq. foot; do., 4 $\frac{1}{2}$  x 1 $\frac{1}{2}$ , 7d.; and 6 x 1 $\frac{1}{2}$ , 7d.; Oregon edge grain, 6d. to 7 $\frac{1}{2}$ d.; ceilings, 6 x  $\frac{1}{2}$ , 3 $\frac{3}{4}$ d. to 3 $\frac{1}{2}$ d. per sq. ft.; Oregon, 4 x  $\frac{1}{2}$ , 4 $\frac{1}{2}$ d.; pitch pine, 7s. 6d. to 7s. 9d. per cub. ft.; Oregon, 5s. 6d. per cub. ft.; clear pine,  $\frac{1}{2}$  in. x 12in., 7 $\frac{1}{2}$ d. per foot; 1 in. x 12in., 8 $\frac{1}{2}$ d.; teak, small planks, 15s. per cub. ft.; do., large, 16s.; jarrah, 8s. 6d. per cub. foot; poplar, 1 in. x 12in., 9 $\frac{1}{2}$ d.; scantling, 9 x 3, 1s. to 1s. 3d. per foot.

Bricks, cement, lime, etc.: Cement, nominal, 34s. 6d. per cask; Pretoria Portland, 9s. 3d. per bag; 8s. 3d., truck loads; lime, white, 7s. 9d.; truck loads, 6s. 9d., slaked; do., 5s.; blue, 3s. 6d.; plaster lime, 4s.; bricks at kiln, stock, 36s. to 42s.; wire cuts, 40s. to 50s. pressed, 65s. per 1,000, road transport getting scarce; salt and white glazed bricks, £27 10s per 1,000; tiles, roofing,

£17 $\frac{1}{2}$  square; glazed tiles, 10s. 6d. to 17s. 6d. yard; paving cement tiles, 8s. 6d. yard laid; terra cotta tiles, £15 per 1,000; reinforced concrete columns, 6 ft. plain, 22s. 6d., fluted, 24s.; fireclay bricks, £9 $\frac{1}{2}$ , good average, per 1,000; clay chimney pots, 80s. per doz.; fireclay, 37s. 6d. ton on rail.

Oils, paints, lead, oxides, glass: Linseed, raw, 27s. 6d.; boiled, 27s. 6d. per 5-gall.; white lead, 70s. to 72s. 6d. 100 lbs; turpentine, 52s 2/4 galls.; 10/1, 57s.; coal tar, imported, 10s. to 12s. 6d. per 5 galls.; oxide in oil, 30s. to 35s. per 100 lbs.; dry oxide, 21s. to 22s. 6d.; S.A. crude oxide, 12s. 6d.; linseed oil putty, 4s. 6d. per 12 $\frac{1}{2}$  lbs.; bladders, 35s. casks of 100lbs.; grease A.F. axle, 23s. 6d. to 25s. per 100 lbs.; tallow, 1s. per lb.; White Rose paraffin, 16s. 3d. 2/5; Laurel do., 16s.; petrol, 26s. 6d. 2/4; motor oil, 6s. to 7s. 9d. per gallon; engine lubricating oils, 19s. to 32s. per case; cylinder, 20s. to 35s.; paints in tins, 10d. to 1s. per lb., according to quantity, and if ordered to be mixed, 20 per cent. on pre-war rates. British plate-glass,  $\frac{1}{2}$  in., 3s. 6d.; do., mirror, 4s. 6d.; window, 16oz., 1s. to 1s. 3d. foot.

Chemicals: Mercury, £18 $\frac{1}{2}$  per 75 lb. bottle; bichromate potash, 2s. 6d. lb.; chlorate, 2s. 6d. lb.; permanganate, 9s. lb.; alum, 5d. lb.; carbolic acid, 7s. 6d. lb.; borax, 85s. 100lbs.; cyanide soda, 1s. 5d. lb.; hypo, 6d. lb.; acetate lead, 70s. 100lb.; litharge (assay), 75s. (commercial), 55s. 100lbs.; zinc sheets and blocks, 1s. 3d. lb.; plumbago crucibles, 5d. per number.

Electrical Goods: Lamps, high volts., British, Holland & American, 16s. to 21s. wholesale, and 21s. to 27s. dozen, retail; carbon lamps, 7s. 6d. per dozen; pure rubber flex, 6d. to 8d. per yard; 3/20 coils of wire, 27s. 6d.; do., 3/22, 22s. 6d.; tubing, 12s. to 13s. 100ft.; keyholders, 2s. 6d. ea.; round blocks, 3 $\frac{1}{2}$  in., 4s. dozen; lamp holder cord grips, 15s. doz.; switches, 5 amp., 13s. to 14s. doz.; British glass shades, 24s. to 36s. doz.; Bohemian shades finished; porcelain shackles, 14s. 6d. doz.; do., hobbins, 16s. 6d. to 18s. 100; cleats, 18s. per 100; P.O. insulators, 18s.; motors, 3 h.p., about £28 to £35, new.



Pittsburgh Steel Company  
Pittsburgh, Pennsylvania, U. S. A.

Manufacturers of  
"PITTSBURGH PERFECT"

## Open Hearth Steel Products

### INCLUDING

Galvanized Wire Bright Nail Wire  
Annealed Wire Bright Hard Wire  
Varnished Wire Bright Soft Wire  
Bolt and Rivet Wire  
Galvanized Barbed Wire  
Wire Nails Fence Staples

Pig Iron, Blooms, Billets, Wire  
Rods, Hard Spring Coil Wire,  
Twisted Cable Wire, Telephone  
Wire, Bale Ties, Steel Hoops, Steel  
Bands, Cotton Ties and Fabricated  
Stock, Poultry and Lawn Fencing.

We are prepared to give PROMPT SERVICE, and solicit  
your inquiries accompanied by complete specifications.

### Address

PITTSBURGH STEEL COMPANY  
EXPORT DEPARTMENT  
EQUITABLE BUILDING  
NEW YORK, U. S. A.

Cable Address: "PITTSTEEL"



## Waterman's Ideal Fountain Pen

THERE he goes, with a merry heart, glad to "do his bit," and prepared to rough it with the best of 'em. But not to put up with the discomfort of camp pens and "service" pencils. Oh dear, no! he believes in a first-rate equipment, so he arms himself with a "Safety" type Waterman's Ideal—the perfect and ever-ready fountain pen.

Far away from home, it will be his easy means of communication with relatives and friends left behind. What a boon it will be to him!

Three types—Regular, Safety, and Lever Pocket Self-Filling. Of Stationers & Jewelers everywhere

**L. G. Sloan, The Pen Corner**  
London, England.



# The Week's Meetings.

## THE NEW GOCH.

Sir George Albu presided at the adjourned meeting of the New Goch Gold Mines, Ltd., held on July 17. He said: This meeting, originally convened for the 25th May, has been adjourned from time to time until to-day, in consequence of certain negotiations to which I will refer later in my address. The accounts for the past year, which have been in your hands for some time show that so far as revenue from gold production is concerned there has been a falling off as compared with the results of the previous year. The net value of the gold won during 1915 was £344,140, as against £380,750 for 1914, being a decrease of £36,610, notwithstanding the fact that 3,200 tons of ore were milled last year in excess of the tonnage crushed for the preceding twelve months. The reason for this reduction in revenue is the drop in the grade of the ore milled; the recovery value per ton for 1914 was approximately 21s. 2d., whereas the average recovery value for 1915 was only 18s. 11d. per ton—a material difference in the case of a low-grade mine such as the New Goch when applied to a total annual crushing of over 300,000 tons. This, however, is a matter over which we have no control. In view of the comparatively low grade, the working profit for the year of £91,356 may be considered as satisfactory, and this has only been accomplished by means of efficient mining combined with a careful supervision of expenditure. This view is to some extent confirmed by the fact that, notwithstanding the increased cost of stores and materials, allowances to employees on active service, war bonuses, etc., the working costs at 13s. 11d. per ton milled show a decrease as compared with the previous year of 4.27d. per ton.

## Debentures Redeemed.

You will perhaps remember that a credit balance of £126,362 was brought forward from the 1914 accounts, representing accumulated profits over the preceding two years. This was, in accordance with the decision mentioned in the annual report of your board for 1914, utilised in the redemption of the whole of the outstanding debentures of your company of £112,475, and in payment of the premiums and interest due on such debentures up to the date of redemption, amounting to £11,923. This practically left only the working profit for the past year available, which was appropriated as to £8,050 in the payment of the Union of South Africa and other Government taxes, and miners' phthisis compensation, £1,500 in the purchase of the Spes Bona claims referred to in my remarks at the last annual meeting, £55,000 was distributed to shareholders in the form of two half-yearly dividends of 5 per cent. each, and the balance of £32,023 has been carried forward to the current year. As a matter of fact, however, the greater portion of this carry forward is not actually in a distributable form, as it is represented by stores on hand, investments, payments in advance, etc., returning to the balance sheet, the chief feature is the elimination of the liability for debentures already referred to. On the other side of the sheet a comparison will show that the item of stores on hand had increased from £7,733 in the 1914 account to £12,676 in the balance sheet under review. I may mention that at the present time the increase in this respect is still more marked, the value of the stores, etc., on hand now being over £28,000. The reason for locking up this considerable additional sum of money is in consequence of our decision to raise our stocks to, and as far as possible maintain them at, a standard representing approximately six months' supply. One effect of the European war has been to make the regular importation of mining requirements from overseas so difficult, and deliveries so uncertain, that as a matter of business precaution we have been obliged to lay in stocks comparatively far ahead of our current requirements, so that in the event of any serious interruption of imports we can keep the mines going for sufficient time to allow of the restoration of easier conditions.

## The War Levy.

It will be noticed that we have only included one-half of this company's estimated proportion of the war levy in the 1915 accounts, and that the remaining moiety is to be charged against the current year's profits. We adopted this course in consequence of an assurance last year from the then Minister of Finance that the impost was not to be regarded as of a recurring nature, and that therefore it might equitably be apportioned out over two years. Subsequent to the preparation of the balance sheet, however, it was announced in the session of the Union Parliament that the Treasury intended to make a further levy of £500,000 on the gold mining industry for the fiscal year 1916-17. Consequently your company's accounts for 1916 will be subject to a charge of at least twice the amount debited in this connection in the profit and loss account for 1915. I may say that we have again received an intimation from the Minister of Finance that the levy is not to be accepted as a recurring one, and I trust that on this occasion the Minister's assurance may prove correct.

## Life of the Mine.

As regards the position underground, the fully and partially developed payable ore reserves at the 31st December last reflect a decrease of approximately 76,000 tons as compared with the figure given in the reports for the previous year. This is partly explained by the remark in the manager's annual report that the faulted nature of the reefs in the lower levels of the property is responsible for developing a smaller proportion of ore for a given footage than is the case when the formation is more normal or regular. In any case, however, we cannot look for the full maintenance of the previous ore reserves in view of the fact that the intact area of the property is showing smaller and smaller proportions. During the last year the main incline shaft has been sunk to the southern boundary, the 19th (or bottom) level is now being driven, and as your manager points out in his report, development work is becoming more and more restricted. Consequently, we are now able to make a fairly reasonable estimate of the unexhausted ore contents of the mine, and this gives us, as far as we can see, a life of between three and four years from the present time. I may say that had the ground in the lower levels been of a less faulted description than that lately experienced the payable ore contents would have been appreciably larger and the life consequently more prolonged. Events may, of course, possibly prove that I am wrong in my prediction—it has so often been the case on these fields that a mine is working long after the lapse of its estimated life—but I feel it is incumbent on me to issue a preparatory note of warning for the reason that the data now at our disposal indicate a distinctly limited period of existence for the Goch. It must be understood, however, that this estimate refers only to the unexhausted ore contents of the New Goch mine, and does not take into account the lengthening of the life of your company which would be effected by the ratification of the agreement to which I am about to refer.

## City Deep Claims.

During the last few months we have been negotiating with the City Deep Company with the view of arriving at a mutually satisfactory agreement for working a block of approximately 21 claims belonging to that company, situated immediately below the New Goch mine and forming part of the eastern section of the City Deep property. Owing to the position of those claims it is definitely certain that they could be mined more

cheaply and with a greater facility by us than by the City Deep Company. The ore stoped from the City Deep ground will be hoisted through our shaft in a mill, and treated in a reduction works, and after debiting a proportion of the expenditure corresponding to the ratio which the tonnage taken from the City Deep claims bears to the total tonnage milled, the net revenue accruing from the City Deep ground will be divided between the two companies on a 50-50 basis which will give roughly half to the Goch on the assumption that the grade is approximately the same as that being obtained from our own claims at the present time, but which will give the larger proportion to the City Deep in the event of their claims proving to be of higher grade than the Goch ground. I may say that the main points of this arrangement have now been settled, and that there is every probability of the agreement, which is manifestly of mutual benefit to both of the companies concerned, being carried into effect in the course of the next week or two.

Before closing my remarks I may point out that milling operations since the beginning of this year have shown improved results. The working profit for January was £33.6, February £7.0, March £9.616, April £10.232, May £10.274, and June £14.7. I may say with an average monthly profit for last year of just under £8.0.0. An interim dividend of 5 per cent. has been declared for the half-year ended 30th June. The actual cash position (notwithstanding the large purchases of additional stores to which I have already referred) would have justified a distribution of 7½ per cent., but in view of the negotiations with the City Deep Company we thought it advisable to conserve sufficient funds to cover the shaft sinking and preliminary development work which will be entailed in opening out the new claims. I have again pleasure in placing on record our appreciation of the work of your manager, Mr. G. G. Holmes. The low figure of the working costs ruling at this mine are a practical testimony to Mr. Holmes' efficient control, and as I have on previous occasions pointed out, his energy in reclaiming old workings has been responsible for the discovery of a considerable tonnage of ore left in the upper sections of the property in the days—years ago—when the then existing scale of working costs rendered it apparently unpayable, but which can now be profitably mined.

The directors' report and statement of accounts were adopted, and the retiring directors and auditors reappointed.

## CENTRAL MINING.

The 11th ordinary general meeting of the Central Mining and Investment Corporation, Limited, was held in the boardroom at No. 1, London Wall Buildings, E.C., on Thursday, June 29, 1916. Sir Lionel Phillips, Bart., presided.

The secretary (Mr. L. Bluen) having read the notice convening the meeting, and also the auditors' report, the Chairman addressed the meeting as follows:—

Gentlemen,—I do not think it will be necessary for me to detain you at any great length in reviewing the operations of the company for the past year.

The policy of strengthening our financial position has been consistently followed, as will be seen by a comparison between the accounts now under review and those of the previous year. Our liabilities are considerably more than covered by liquid assets without taking into account cash or

securities in enemy countries or with enemy banks. Shareholders may wonder why the item under the last-named heading has risen by about £20,000 in the accounts now before you. This is accounted for by Bulgarian Treasury Bills which, of course, we held before the outbreak of war. Our holding in British Government securities has been very greatly increased during the year, while the amount under "Head Office Loans" has very materially fallen. The £239,000 "at call and at short notice" is placed with London banks and bill brokers. Advances to "brokers and others against securities" are sound. The sum "Subject to Emergency Rules" has been reduced from £476,000 to £94,000, omitting minor figures, as shown, in the accounts, and to-day only remains at about £65,000.

### Profit and Loss.

Turning to the profit and loss account, the balance carried forward to appropriation account exceeded that of the previous year by £35,000. Holding in view the stagnant condition of general business this will no doubt be regarded as satisfactory. I regret that it should have been necessary to use this sum for the purpose of meeting depreciation. While upon this subject you will perhaps permit me now to refer to the special resolution submitted for your consideration to-day. I do not think I can usefully add much to the circular sent to you with the annual report. The recommendation to reduce the capital has only been made after the most earnest consideration, and I am sure the adoption of the proposal will prove beneficial to shareholders. The assets of the company have been valued with scrupulous care and with a prudent recognition of the times. The writing down of our share capital naturally has no real bearing upon the value of our possessions, because whatever our assets may realise, and whatever profits we may succeed in making, are divisible amongst us all on equal terms since participating directors' rights have disappeared. There is no manner of doubt that by reducing the capital to-day there is a far better prospect of the intrinsic worth of our shares reaching in time their present nominal value than by waiting to liquidate the depreciation gradually by the absorption of profits. I feel justified in saying that if you pass the necessary resolution to-day we shall, after securing the sanction of the Court, be in a position to resume the payment of regular dividends as well as to make provision for the redemption of wasting assets.

### Gold Mining Industry.

Owing to resignations from the Board, which were brought about through the war, I found my hands very full until the beginning of the present year, when I was able to find time for a flying visit to South Africa, where we have such important interests. Mr. Marriott, the company's consulting engineer in London, accompanied me. My general impression of the gold mining industry is satisfactory, though I am bound to say that the war is having a greater effect upon it than is generally supposed. It would be ungenerous not to recognise the hearty support received from the Imperial and the Union Governments and from the High Commissioner for the Union of South Africa in London in the prosecution of our work. Thanks to their assistance, the requisite supplies and spare parts for maintaining machinery are being obtained, although their cost is considerably higher than in normal times. But the cost of supplies, etc., is not the only direction in which the industry is suffering. A great many of our best men have joined the active forces in South Africa and in England, and a good many of our most efficient mechanics are engaged over here in the manufacture of munitions with less to the mining industry which is not to be expressed in figures. The number of white men available for carrying on operations is inadequate for the most efficient working. In most departments, therefore, I think we must admit that the work is not quite as well done as it is in normal times.

### Working Costs.

Reference to the cost sheets shows that working costs in 1915 were 19s. 2d. per ton, or 1s. per ton below 1912; in 1914 they

were 17s. 10½d. per ton, or 1s. 3½d. per ton below 1913; in 1915 they were 18s. 3d. per ton, or 4½d. per ton above 1914. The average for the first five months of this year is 19s. 3d. per ton, which is a further increase of 1s. per ton above 1915. But I may repeat that these figures do not in my opinion complete the picture, because there are many directions, besides that of working costs, in which the profits may be affected, such as less competency in the extraction and development of clean ore. The cost of realising gold was greater, and the emergency taxation imposed by the Union Government put a burden of an extra £500,000 upon the mining industry. The increased taxation on our mines amounted to 6d. a ton.

The death rate on the mines, though slightly higher than in 1914, shows, I am glad to say, a considerable decrease on former years, and there appears every prospect in time of very considerably reducing, if not entirely eradicating, the disease of miners' phthisis. The Select Committee of the Union House of Parliament has taken evidence, and reported upon the subject of preventive measures and compensation payable to sufferers, and their recommendations have been adopted by the House. They will certainly involve additional outlay, but owing to the precautions now taken in mines and the additional steps which are now to be taken for combating the trouble, I believe in a very few years the amount of suffering and the great outlay involved may be reduced to quite small proportions.

### Corporation's Properties.

It is not possible for me to speak in detail upon all the properties with which your Corporation is associated, and I would refer those of you who are interested in particular mines to the reports and speeches of chairmen at the annual meetings. Some of the properties we are largely interested in have been giving unsatisfactory, others particularly favourable, results.

As a matter of general interest, I may say that the gold output of the world in 1915 was £97,000,000, of which the Transvaal contributed £38,627,000, or about 40 per cent. The mines with which your Corporation is associated produced gold to the value of £14,840,000, equal to 38½ per cent. of the whole Transvaal output. This is the same proportion as for last year. Our contribution towards the dividends of the Witwatersrand goldfields amounted to 50 per cent. of the whole.

I will now touch upon a few points in connection with working and reconstruction of some of the mines in which you are interested.

### Crown Mines.

The Crown Mines has been much in the public eye during the past few years. While the tonnage mined has consistently increased during the past five years the gross revenue has kept more or less stationary, being the result of a yearly reduction in the average value of the ore reserves. This reduction has taken place as the higher grade deposits in the upper eastern part of the mine have been worked out. Development in the central and western sections of the mine has exposed ore of lower value. An increase of gross profit was expected to result from the greater tonnage crushed, but this has been largely absorbed by other costs which did not enter into the calculations when the original estimates were made, such as cost of additional mining regulations, sand-filling, and other safety measures, rise in outlay on labour, stores and development.

Owing to the abnormally large supply of hand labour available an experiment upon an extensive scale was recently undertaken to determine whether by mining narrower widths, and possibly leaving behind very low grade bands of reef, a better return could be secured. The results of the experiment under the conditions upon which it had to be conducted were entirely unsatisfactory in that working costs rose to a far greater extent than the value of the ore sent to the mill.

### Machine Stopping Again.

The old system of stopping with machines has therefore been resorted to, but it must

necessarily take a few months to revert to this system, more particularly as so many white miners have joined the colours. During the experiment it may also be observed it was impossible to keep the mills fully supplied, which was a contributory cause of increased cost and decreased profit. The experiment has, however, been of great value in demonstrating the most profitable system of working this property, taking into consideration lay-out, appliances, and the class of labour available. Raw natives, for instance, of whom a great many had to be used in a large experiment, are scarcely a criterion of what results could be anticipated with trained labour. As it is obvious, however, that the mines of the Witwatersrand are usually dependent upon a considerable percentage of raw boys, it follows that only a moderate amount of stopping by hand labour can be profitably undertaken in most cases.

The speculative value of the property lies to the south of the South Rand dyke, but I have no definite statement to-day upon which I should be justified in making a valuation of this section of the country. I do feel able to say, however, that where rich levels give place in depth to a number of poor levels our experience of the Witwatersrand leads us to expect a recurrence of higher values sooner or later. This I have no doubt may prove to be the case at some point south of the South Rand dyke. It may interest shareholders to know, if they have not read his admirable papers, that Dr. Mellor, the Government Geologist, does not support the theory of gradual impoverishment of the beds of the Witwatersrand, although he appears to think that at greater depths the gold may be more concentrated in special channels. I should also perhaps point out, as the chairman of the company did in his exhaustive address, that the unworked ground on the west side of the property, which forms by far the larger reserve of ore north of the dyke, tends to show rather a higher value in development than was anticipated.

### City Deep.

On the City Deep the ore reserves have been valued at over 40s. per ton for the last three years. The profit has increased by 5s. a ton in the last two years. The deepest drives, etc., throughout the present mine have exposed ore of excellent value.

The crushings on this mine have been at the rate of 56,000 tons per month. An addition to the plant now being made will gradually increase its capacity to 80,000 tons per month. The profits will improve as the extra tonnage is treated. This mine, with its proved widespread deposits of rich ore in a locality once estimated to be of very little value, is a striking instance of high values at considerable depth.

I will now mention a less important mine in which we have a substantial interest, the Bantjes Consolidated. This mine has been worked chiefly on the south reef, on which the results of development have been for some time past on the down grade. Latterly, the drives on the main reef level have shown improvement, and development work has therefore been pushed on this reef. These new developments represent between 300,000 and 400,000 tons of ore not yet blocked out, of a value of about 6 dwts. per ton. Somewhat over half of the total development done on this reef is giving payable results.

### Other Holdings.

The Village Deep, in common with the mines above it, has in the course of mining operations passed through zones of varying grades. Some of the deepest workings at 4,000 ft. vertical depth have now opened up ore equal to the best grade that has been worked in the upper levels. This promises well for future developments.

**Random Proprietary Mines.**—The annual report of this company gives explicit information which I cannot usefully add to. I may observe, however, that the water dyke has proved a great obstacle to development. A courageous programme to open up areas at lower levels is being undertaken, as the result of which I hope that ore of a better grade than that exposed for some time past may be found.



In Modderfontein B the reserves have increased in value as development has progressed, and the profit per ton has consistently increased each year since the commencement of crushing in 1911. The prospect of maintaining its high rate of profit is very good.

The New Modderfontein still holds its position for great stability as a mining venture.

While the reserves have been largely increased in amount they have held their grade, and the profit per ton has been nearly doubled during the last five years.

The crushings last year averaged 51,000 tons per month. An addition to the reduction plant is in course of construction, which, when completed, will bring the capacity for treatment up to a total of 90,000 tons per month. Some of the ore dealt with by the increased plant will be of a lower grade than that at present being mined, but the results of the surrounding properties indicate a maintenance of the general average of values throughout the life of the mine.

I do not think it necessary to refer to other mines, as in these cases either the smallness of our interest or the normal outlook renders it unnecessary to detain you.

### Robinson Deep—Booyens.

Your Corporation is, as you know, largely interested in the Booyens Block, comprising some 342 claims south of the Robinson Deep. The project of amalgamation between the two concerns had been under consideration for some years. From a technical point of view there are few cases in which the advantages of amalgamation are so obvious. The Robinson Deep owns two shafts, large reduction works, and the appertaining general surface equipment, but, for the prolongation of its life, needs additional mining ground. Booyens owns each mining ground in the most favourable relative position, but is without reduction plant, surface equipment and shafts. The problem of the amalgamation, however, offered some difficulties, because the assets of the Robinson Deep could, on account of the far advanced stage of development, be estimated with a considerable degree of accuracy, while the value of the practically virgin Booyens ground is a quantity unknown; indeed, the estimates of the engineers concerned differed widely. The problem has, however, been solved, I think, in a very satisfactory manner. The Robinson Deep shareholders have been allotted preferential shares, called "A" shares, in a new Robinson Deep Company, by which the full return of all benefits which could possibly accrue to them has been safeguarded. Booyens, on the other side, have been granted "B" shares, which will enter into the dividend paying stage some four years hence; the amount of the dividends payable to them will to a very great extent depend on the value of their own ground, which can now be worked under very favourable conditions, as the fresh capital required for exploration purposes will be reduced to a minimum.

### Guarantee of Capital.

The Consolidated Gold Fields, however, and our Corporation have undertaken to advance jointly up to £300,000 for such exploration purposes if, and when, required, so that no restriction of development is to be anticipated for want of funds. The sinking of a large new vertical shaft on Booyens Block has in the meantime been started. An option over 100,000 "B" shares at par has, in consideration of the facilities offered, been granted by the new Robinson Deep Company. The principal advantage of the whole transaction consists in the conversion of assets, which have for a long time been dormant, into negotiable securities.

Daggafontein.—As stated in my report, we have taken a hand in the exploration of the mining rights on the farm Daggafontein, situated on the far Eastern Rand, and adjoining the farm Rietfontein, on which the mining rights of Springs Mines, Limited, are situated. The initial amount of working capital provided for amounts to £300,000, and may go far towards testing and opening up the property, especially as there is one large deep level shaft down to the reef already, apart from a fair amount of

surface equipment. The shaft has in the meantime been unwatered and development operations started. Resampling of the shaft confirmed the good values already reported. Given favourable results, the scheme underlying the formation of the new Daggafontein Company provides for sufficient funds to bring the mine to the producing stage.

Purchase of Claims on Vegelstrai-buit.

You will have seen in the report a reference to our joint purchase with the Rand Mines of 862.38 claims, for which we paid a comparatively small sum of money.

### Far East Risks.

Having regard to the great risk involved in opening up ground on the far Eastern Rand, I am bound to say that I regard the value of virgin soil as of very small moment compared with the large outlay required for testing it. According to the latest scientific information, we may expect to find in that region sections of highly payable ground, and sections almost, if not entirely, barren. A great deal of that country is overlain by dolomite formation, which, as everyone knows, harbours large reservoirs of water. The cost of sinking shafts there on that account may be much higher than on the Central Rand. Generally speaking, it may be said that from £800,000 to £1,000,000 has to be spent there upon a given property before any definite knowledge is secured to indicate final success or failure. Before we joined in the enterprise with regard to Daggafontein we had the advantage at least of the information supplied by one deep level shaft which had encountered the reef at a payable point. It would be folly, however, to shut our eyes to the speculative nature of deep level enterprise in that locality, good as the results have been in some instances, notably those of the Modderfontein, Brakpan, and Springs areas. But there are in the neighbourhood also mines upon which large capital outlay has been incurred, and the reefs encountered without encouraging results. I mention these dormant areas now because I think it is to be regretted that the Union Parliament closed its session without amending the present law under which there does not seem much likelihood of placing them. As deep level blocks take years to bring to the producing stage the sooner the work of sinking shafts begins the better for the country.

### State Mining.

Some local agitation by those who advocate State industrialism has arisen in favour of the Government undertaking the work itself. I see that the Minister of Mines announced that the Government is considering the appointment of a Commission to investigate during the recess the feasibility of State mining.

If the Union Parliament after inquiry sanctioned such a course of action we should watch its operations as large taxpayers with attention, anxious interest, and whole-hearted good wishes for its success.

I think that such ventures are best left to private enterprise, but the point is that about five years are required to find out whether a prize or a blank is drawn, and it is hence advisable to get a move on. I venture to point out, however, that the revenues of the State are far more benefited by the active working of mines—in Customs, railway revenues, etc., from mining machinery, supplies, and the wants of the population—than from any direct profit State ownership could bring. Moreover, private enterprise has to shoulder the burden of possible failure. The best method of dealing with such property is, I think, to get substantial people to take the risk and to do the work naturally with an economy in their own interest not always agreeable to the advocates of State enterprise. In the event of success the State might reasonably allow them a preferential charge upon profits to cover interest on actual outlay, and then divide, in proportions to be agreed upon, any surplus profits. Unless these areas contribute there will be a serious decline in the gold output, with adverse consequences in the sphere of employment and in the annual exports and revenue of the country.

### Bewaarplaatsen.

The House of Assembly has adjourned without having dealt with the bewaarplaatsen question in which this Corporation is interested. The Union Government is pledged to a settlement of the question in terms of the Ewelen Commission's report, but has shelved the question over several sessions for political considerations; a course of procedure that is hardly dignified or good for the credit of the country. Large sums of money are accumulating from the workings of some of the areas concerned. The moral title by freeholders to half of the proceeds is not open to question, and the longer the matter is deferred the more embarrassing to the financial situation. In the face of the available evidence and the findings of the Special Commission appointed to inquire into all the circumstances which presented its exhaustive report as far back as February, 1910, the procrastination is no less surprising than it is disquieting.

The state of internal politics may provide a justification for deferring action in directions where racial considerations may be deemed to have a bearing, but in a case of ordinary equity such considerations should not, and cannot, honourably be allowed to intrude.

### Enemy Shareholders.

A cause of anxiety for the directorates of South African gold mining companies arose during the year in connection with the vesting orders made by the English High Court (pursuant to Section 4 of the Trading with the Enemy Amendment Act, 1914), which conferred on the English custodian power to transfer shares registered in the names of enemies. There may be some misunderstanding as to the basis upon which the custodian would give an order for the transfer of shares. Such an order is only given as the result of an application to the High Court by a creditor in this country against an enemy shareholder, and I give this explanation in order to dispel the idea that the provisions are in any sense a step in the direction of confiscation. The companies registered in South Africa are naturally subject to the jurisdiction of the Courts in that country, and, if they had obeyed such vesting orders without being protected by corresponding legislation in the Union, they would have been liable to have been successfully sued in South African Courts by enemy shareholders after the war. An action to test the validity of these orders so far as they affected South African companies, and to help to define the scope of legislation required in South Africa, was therefore commenced the Modderfontein B Gold Mines Limited, being the defendants. In the meantime an Enemy Trading Bill was introduced in the Union Parliament, and the High Commissioner was good enough to cable out, for the consideration of his Government, certain amendments which I submitted to him. These were accepted by the Union Government, and incorporated in a revised Bill, which has now been passed. A copy of the Union Act has not yet been received, but I understand that the companies are perpetually indemnified in respect of moneys representing dividends due to enemies which were paid over to the public trustee prior to the commencement of the Act, and are also authorised to register and act upon the vesting orders made by the English Court. I gladly take this opportunity of acknowledging the readiness with which our representations were received and acted upon by the High Commissioner for the Union of South Africa and by the Government of that country.

### Other Interests.

Sudan Plantations Syndicate, Limited. The Corporation's interest in the Sudan Plantations Syndicate remains practically unchanged. The prospects of the Syndicate may be considered satisfactory, but the negotiations with the Sudan Government in connection with the development of the Gezira Plain remain in abeyance. Through the lamented death of Lord Kitchener, who was greatly interested in the development of the cotton growing industry in the Sudan, and whose efforts towards improving the conditions of the native population were eminently successful, that province, unfortunately has lost a sincere friend and



a staunch supporter. Perhaps before I pass on I may say that I believe the negotiations with the Sudan Government will shortly be resumed on this very important matter concerning the development of the Gezira.

**Standard Alcohol Company.**—The investigation into the affairs of the Standard Alcohol Company, to which I referred last year, has not shown encouraging results. For this reason your Corporation and the other London stockholders refused to provide further funds, and the company had to be put into the hands of receivers.

Although at one time it was feared that the whole of the capital sunk in the enterprise would be lost, a scheme of reconstruction was eventually evolved which received the sanction of a majority of the shareholders, and bids fair to preserve existing interests, although in a considerably attenuated form.

### In Trinidad.

**Trinidad Leaseholds, Limited.**—The development operations of Trinidad Leaseholds, Limited, in which your Corporation is largely interested, continue to show gratifying results. Work is at present being concentrated on the forest reserve property, and in addition to the production obtained from the upper strata high grade oil has been encountered in the lower tertiary series, where a gusher recently yielded some 20,000 barrels of oil in 30 hours, all of which was safely collected. The pipeline from this field to Point a Pierre, a distance of approximately 30 miles, was completed in the spring of this year, and is working satisfactorily. An island jetty has been constructed about a mile from the shore, where vessels of deep draught can safely anchor and receive their supplies of oil through a submerged pipe line connected with the main pipeline.

Closed storage tanks have also been erected both on the field and at Point a Pierre.

A refining plant, designed to take off the lighter constituents of the oil, was ordered in this country some few months ago, and it is anticipated it will be in commission before the end of the year. When this plant is erected and running the company will be in a position to supply fuel oil to the Admiralty specification. In the meantime contracts have been secured over a considerable period from two sugar refineries in the island, from the Municipal Council of the Port of Spain and others, and deliveries are now being made under these contracts from oil accumulated in open reservoirs. A small bunkering business is also being done.

### Admiralty's Purchase.

The Government, recognising the excellent work already performed by the company, and the Admiralty having received favourable reports as to the quality of the oil, have purchased a cargo of crude oil, and have arranged to send a tanker to Point a Pierre next month to take delivery. I have the permission of the Trinidad Leaseholds to make this announcement to you.

A sufficient number of wells has now been sunk to secure an output of 1,000 tons per week, but this quantity could, if necessary, be very largely increased in a few months at comparatively small expense.

Owing to the war it has been necessary for the company to raise additional loans to enable it to carry on its operations to the self-supporting stage, which is expected to be reached by the end of this year. Your Corporation, in view of the encouraging prospects, had no hesitation in providing the bulk of the money required.

Having regard to the good work which has been done and is being carried on by Trinidad Leaseholds, and its national importance, there seems every reason to hope that the Imperial and Trinidad Governments will do everything in their power to foster this promising industry.

### Future Policy.

I do not think it is necessary to delve further into the affairs of the Corporation, but I may perhaps profitably say a word about future policy. During the war we have conceived it to be our duty to pursue a very conservative policy, having for its aim the strengthening of the financial position,

and in that direction we have made some strides. I have no doubt when peace is restored there will be plenty of openings for safe and profitable business, in which we shall hope to share, but we shall proceed with caution, because it is very difficult to foresee what effect the enormous consumption of capital and piling up of debt by the belligerent countries is going to have. An inevitable outcome will be a change in commercial conditions. It would be profitless for me to speculate upon the radical changes in commerce which may result from fiscal changes, but I feel bound to reiterate what is common knowledge among men of affairs, that the stress of life is bound to be more severe than hitherto. Changes will no doubt demand a regeneration of industrial methods, habits and practices, and this will have an effect upon us all from the top to the bottom. But for the restoration of pre-war prosperity two paramount duties will be demanded from us all, thoroughness and hard work. These are watchwords for all who hope to lead their fellow-men.

### Board Changes.

I referred in the earlier part of my speech to resignations from the Board. I am happy to tell you that we have succeeded in securing the services of two new directors, the confirmation of whose election comes before you to-day. Mr. H. Ross Skinner is well known to all who have been connected with the Witwatersrand. Sir Sothern Holland was well known in South Africa as the British Trade Commissioner. Both he and Mr. Ross Skinner have been rendering valuable service at the Ministry of Munitions. Mr. Ross Skinner, I am glad to say, has so far completed his work in that department that he has been able for some time to give us a portion of his time, and will shortly cease to have any connection with the department. It is his intention to proceed to South Africa early next month, where he will stay as resident director. Sir Sothern Holland is still needed by the department, but I am hoping that he will also be free to give us all his time by the end of the present year. Besides the services of these two gentlemen, I may add that our consulting engineer, Mr. Hugh Marriott, was also for a considerable time engaged in organisation work in the same department.

Many of our associates are serving at the front, and some of them, alas, have been killed and wounded. Colonel Mingo, who was manager of the Transvaal Consolidated Land Company, and had seen a good deal of service in South Africa, joined the forces here, and was unfortunately killed in France. In the loss of this gallant officer I have also to deplore the loss of a personal friend.

I will not close without paying a tribute to the managers of the Corporation, both here and in South Africa, and to the staffs who have given us good and loyal service under very trying conditions, owing to the shortness of men consequent upon numerous enlistments. I now beg formally to move the adoption of the report and accounts.

Mr. Georges Rouliot: I have much pleasure in seconding that.

### Report and Accounts Adopted.

The chairman having invited discussion and no questions having been asked, the motion was put to the meeting and carried unanimously.

The Chairman: It gives me great pleasure now to move that Sir R. Sothern Holland and Mr. H. Ross Skinner, who were elected directors on December 31, 1915, and who retire in accordance with the articles of association, be and they are hereby, re-elected directors of the Corporation.

Mr. Charles Pakeman seconded the resolution, which was unanimously adopted.

The Chairman: I also move that Mr. Octave Homberg and Mr. Raymond W. Schumacher, who retire by rotation, be, and they are hereby, re-elected directors of the Corporation.

Mr. Otto Beit seconded the motion, which was unanimously agreed to.

On the motion of Mr. Frank Robinson, seconded by Mr. Pakeman, Messrs. Cooper Brothers and Co. were reappointed auditors of the Corporation.

### Reduction of Capital.

The Chairman: I now come to a very important resolution, viz., that with reference to the reduction of the capital, and will move: "That the capital of the company be reduced from £5,100,000, divided into 425,000 shares of £12 each, to £3,400,000, divided into 425,000 shares of £8 each, and that such reduction be effected by cancelling paid-up capital which has been lost, or is unrepresented by available assets, to the extent of £4 per share upon each of the 425,000 shares which have been issued and are outstanding and by reducing the nominal value of such shares to £8."

Mr. T. J. Milner seconded the motion, which was carried unanimously.

The Chairman: I should like to mention that the special resolution which has just been passed will be submitted for confirmation to an extraordinary general meeting to be held on Friday, July 14, 1916.

I may add that this meeting is a very representative one, and that we have an even larger representation this year than we had last.

Mr. F. J. Dormer, in moving a vote of thanks to the chair, referred to the strain imposed upon directors in these anxious times. "When things are going well," he said, "directors scarcely require the assuance that they have the full support and confidence of their shareholders, but in times like these such an assurance is valuable to them." He then moved the vote of thanks, and commended the excellent manner in which the business of the Corporation had been conducted during the past 12 months.

Mr. F. A. Robinson seconded the vote of thanks, which was carried unanimously.

The Chairman having expressed his appreciation of the compliment, the proceedings terminated.

## VILLAGE MAIN REEF.

### CHAIRMAN EXPLAINS THE CAUSES OF REDUCED PROFITS.

The twenty-fourth ordinary general meeting of the shareholders of the Village Main Reef Gold Mining Co., Ltd., was held on June 23rd, at Salisbury House, London-wall, E.C., Mr. M. A. Bramston (chairman and managing director) presiding.

The Acting Secretary (Major F. de M. Cuninghame) having read the notice convening the meeting and the report of the auditors.

The Chairman said:—Gentlemen, with your approval, we will take as read the report of the directors, the reports of Mr. Stuart Martin, our consulting engineer, and of Mr. Hilton, our manager, and the audited accounts. If you will be good enough to refer to the balance-sheet, you will see that there is no change in our capital, which remains at £472,000. Our reserve account having been closed, this item no longer appears. The contingent liabilities on shares held not fully paid amount to £6,111 2s., about £340 less than last year. On the other side of the account I would call your attention to the item machinery plants, tools, and equipment, the amount of which has been reduced from £89,751 13s. 4d. to £43,655 2s. 6d., the difference being sales during the year. The amount set against stores and materials is considerably greater than last year, and this is no doubt accounted for by the fact that in common with other mines we have had to carry larger stocks to insure against possible stoppage from temporary shortage of supplies. Investments at cost appear as £192,863 3s. 9d., being considerably less than last year. This difference is mainly accounted for by the depre-



ciation in the market price of our shares in Village Deep, Ltd. If you will turn to the appropriation account you will see that we have written off £14,64 16s. against investments. The amount appears to be a large one, but I would remind you that we are not the only company which has found it prudent under present conditions to write down investments. Our profit and loss account is, I regret to say, not so satisfactory as the previous year. The balance we carry to appropriation account is only £110,795 13s. 9d., as compared with £263,789 15s. 7d. last year. But we have not only had a serious accident at the mine, but the value of the ore recovered has been less and the working costs higher. The value of the ore milled was 3s. 3.901d. per ton less than last year, and the working costs were increased by 3s. 7.954d. per ton milled. We paid an interim dividend of 4s a share in June last, but our position did not warrant the payment of a final dividend at the end of the year. The reserves are estimated at 635,050 tons, which indicates a life of about two years. The average value of the gold in these reserves is 29s. 8d. per ton.

### Effects of Earth Tremors.

It is with great regret that I have to call your attention to the further movement of strata which took place in September last, and which was attended with somewhat serious results. You will remember that at our last meeting I had to refer to the damage caused in the main shaft by the subsidence of ground, and to explain to you that the reduced profits in November and December, 1914, were principally attributable to the occurrence. Last September another movement of strata took place, resulting in a further subsidence, which affected the vertical and incline shafts on the 9th and 10th levels. Hoisting from the lower levels of the mine was entirely suspended, and new connections had to be made through more solid ground, together with new ore bins before the delivery of ore to the surface could be fully resumed. The repair work occupied three months, and a loss on current workings of over £30,000 was incurred. This loss is, of course, quite apart from the loss of profit on the ore crushed during that period. There was, I regret to say, some loss of life; but this was, fortunately, minimised owing to the fall occurring just before the lowering of the day shift. As you may have observed from the latest returns, a profit of £16,719 was realised during last month, and from this it would appear that the working conditions were then normal. We are, however, cautioned by our consulting engineer (Mr. Stuart Martin) against reliance in the future on continuous mining up to the full capacity of the reduction works, and he advises us that frequent shocks are still to be looked for as the excavated areas become more extensive and the overlying rocks subside. He assures us that every precaution is being taken to protect the workings which must be kept open for mining purposes. A report on the subject of these earth tremors has been recently made by the Witwatersrand Earth Tremor Committee, consisting of the Government mining engineer, the Union astronomer, and a representative consulting engineer. The report states that shocks began to attract attention in 1907, and that since that date they have increased in number and intensity. The shocks consist practically of a single sharp vibration, and differ in this respect from earthquakes, which are made up of a

train of earth waves, whose vibrations are generally slower and of greater amplitude than that of a shock. The cause of these earth tremors is not, except in rare cases, to be attributed to natural causes, but in most cases can be traced directly to mining operations. The removal of the reef or reefs over large areas throws the superincumbent weight on to the unexcavated pillars, which below a certain depth are unable to bear the weight, and are crushed. Sand filling may diminish the effects, and it is without doubt owing to our sand-filling operations that the damage done to our mine has not been more serious.

### Total Dividend Distribution.

We have made it a practice to make a statement in our report of the amount distributed in the form of dividends among our shareholders. The total now reached is £3,667,143. On this sum we have had to pay toll, and it may interest you to know the result of a calculation I have had prepared. It appears that no less than £645,337 3s. 9d. has been paid in taxation. The details may interest you, and they are as follows:—Income-tax, £250,271 7s. 16d.; profits tax, £333,332 3s.; Union of South Africa Government tax, £151 15s. 7d.; special South African war levy, £7,030; and French tax, £54,751 17s. 4d. Roughly speaking, no less than one-seventh of our profits have been paid in taxation. I now beg leave to move:—"That the report of the directors and the audited statement of accounts to December 31st, 1915, be received and adopted, and that dividend No. 30, of 2s. per share, free of income-tax, payable to all shareholders registered on June 30th, 1916, be declared."

Mr. T. J. Milner seconded the motion.

### Holding of Village Deeps.

Mr. H. B. Nash said he had listened with great pleasure to the chairman's address, but inasmuch as the life of the mine was only two years, he wished to ask whether the directors had considered the advisability especially in these times, when money was so scarce of distributing pro rata among the shareholders the company's holding of Village Deep shares. He could not at all see the object of the company holding them; in fact, it was his opinion that it was wrong to do so. They had been acquired out of the profits made in the past; they were the property of the shareholders; and, having regard to the short life of the Village Main Reef mine, the time had now arrived when the Village Deep holding should be distributed. It would be an easy matter, for the number represented one in four of the shares of the Village Main Reef Co. There was no doubt, from the consulting engineer's report, that further trouble would be experienced in connection with earth movements, and no doubt the working costs would be greatly increased thereby during the two years of life that still remained.

Mr. Astley, in a lengthy speech, supported the views expressed by Mr. Nash, which, he said, he had himself voiced at the meeting two years ago. By taking the course suggested a bone of contention would be removed. Mr. Astley entered at considerable detail into the question of the acquisition of the Village Deep holding. He went on to suggest that the distribution to the shareholders should not be 2s. per share, as proposed by the board, but 4s. per share. The appropriation account showed that the sum of £245,611 was carried to the balance sheet,

which was a great sum, having regard to the fact that the mine had only two years to run. There was no possible necessity for any heavy expenditure on machinery and plant, and if further trouble arose from earth tremors, necessitating large expenditure on repairs, it would be the duty of the directors to consider whether they ought not rather to close the mine.

Mr. Milner said that the balance of appropriation account included the Village Deep shares.

Mr. Grove asked whether the board had available sufficient money to cope with any further earth tremors, if they disposed of the holding of Village Deep shares. As the value of those shares was included in the £245,000 referred to, he imagined that the company would be left with no great margin after the dividend proposed had been paid.

Mr. E. Martin supported the suggestion that the Village Deep shares should be distributed and that the dividend should be increased.

Mr. Grove asked what was the value of the bewaarplaatsen rights.

### Mr. Milner's Statement.

Mr. Milner, replying on the discussion, said: I should just like to say a few words about the investment in Village Deep shares. First of all, 34,926 shares of the Village Deep accrued to this company on the absorption of the Wemmer Co. Some time after that the directors considered that it would be a wise policy to increase the holding of Village Deep shares, because they then looked upon them as a sound investment, and they have no reason to alter their opinion to-day. So it has arisen that we have increased the holding, as you know, to 118,000 shares. It is true that these shares have depreciated in value; but tell me what investments have not depreciated in value, having regard to the existing conditions created by the war. So far as this investment is concerned, I consider it a good one, and I believe my colleagues share that view. As far as my information goes, the development in the lowest depths of the mine is exceedingly satisfactory, and I have no reason to think that you will be displeased eventually with our purchases. I should just like to point out to you that the dividends paid by the Village Deep Co. have been as follows: In 1911 they paid 10 p.c., in 1912 17½ p.c., in 1913 15 p.c., in 1914 21½ p.c., in 1915 21½ p.c., and this year an interim dividend of 3½ p.c. has been declared. There is one more point I should like to mention. It seems to be the opinion of certain shareholders that we should distribute these Village Deep shares. All I can say is that I am quite certain the directors will take your views into their very serious consideration. Personally, I should like to keep up the shares for you until the end of the life of the mine, when the company will be either liquidated, or some other arrangement will be made. I can tell you that there is no scheme of any description before us to-day, but our idea was that we should build up for you this little nest-egg, so that you would have an interest in a mine with a very long life, an interest which we, as I have said, considered at the time to be a very good investment, and which we consider so to-day. A shareholder asked a question about the bewaarplaatsen. Nothing has been settled by the Union Government yet about the distribution of the funds accruing to the freehold owners.

Mr. Nash asked whether the directors had any objection to the directors distributing the Village Deep shares.



Mr. Milner said he would ask them to leave it in the hands of the directors for consideration. In principle there was no objection, but they had followed a certain programme by which they thought the shareholders would benefit most. When the Village Main Reef Mine came to an end there would then be a distribution of these shares, and anything else arising out of the liquidation. They were not, however, wedded to these ideas, and if shareholders particularly wished that the Village Deep shares should be distributed, the directors would give earnest consideration to their views.

Mr. Nash said that at the present time their Village Main Reef shares were declining in value, and shareholders might be compelled to sell and pass on to others the Village Deep interest which was theirs. That, he thought, was most unfair to present shareholders.

Mr. Milner replied that obviously if the Village Deep shares were distributed the market value of Village Main Reef shares would suffer correspondingly, because in that market value was included the value of the Village Deeps.

Mr. Nash said that by the distribution of the Village Deeps they would make shareholders in the Village Main Reef shareholders in the Village Deep, which he understood was the directors' object.

Mr. Milner agreed, and repeated that the directors asked that the matter be left to the directors for consideration.

### The Chairman's Reply.

The Chairman said: As regards this question of distribution, I think I ought to tell you that there is a little difficulty. In the first place, it is very doubtful whether a company is justified in distributing assets which may represent the capital of the company. You will remember that at least a portion of these shares does actually represent capital. Beyond that there is a very serious question whether it is not the duty of a company to retain, in hand, without distributing it, sufficient funds to enable the capital to be intact at the end of the life of the mine. Therefore, we have one or two difficulties of that kind to contend with. Mr. Grove asked whether we have sufficient funds in hand to enable us to deal with any trouble in the way of earth tremors which may occur in the future. We cannot possibly answer a question of that kind. For all we know, the whole of that part of the country might be seriously affected, but, so far as the experience of our engineers goes, we have every reason to believe that any such troubles will not be very serious, and that we have sufficient (if we do not distribute everything) to enable us to deal with any difficulties at the time.

The resolution was then put to the meeting and carried unanimously.

The Chairman proposed the re-election of the retiring directors (Messrs. H. F. Marriott and P. Buisson).

Mr. C. S. C. Watkins seconded the motion, which was unanimously adopted, and the auditors (Messrs.

Fuller, Wise, Kirby and Fisher) were reappointed.

Mr. Nash: I think before we separate we ought to thank you and the directors for your kindness to discussing matters so thoroughly with us, and giving us all the explanations we have asked for. I may say I have been quite satisfied that you are willing to do your level best in the interests of the shareholders. I think that in a proposition of this kind we should include our staff out in South Africa, and that our thanks should be given to them for the way in which they have carried out the tedious and troublesome work they have had to do during the past year with regard to that earth movement. As a mining engineer I know something about the trouble of it myself. I am sure they must have had an anxious time, and it looks as if they would have considerable anxiety during the next two years. I hope the vote will be carried unanimously, and that the staff in South Africa will feel that the shareholders appreciate their work.

The resolution was seconded and carried unanimously.

The Chairman, in acknowledging the compliment on behalf of his colleagues, and the staff, said he was very grateful to Mr. Nash and the shareholders for the very kind way in which the resolution had been proposed and seconded. He could assure them that this vote would greatly encourage them both here and in South Africa. He assured them that this company would always endeavour to consult the shareholders, and listen carefully to their remarks.

The proceedings then terminated.

### New Registrations.

#### LIST OF COMPANIES FOR JUNE, 1916.

- Lazarus and Company, Ltd., 109, 110 and 111, Stock Exchange Buildings, Marshall Square, Johannesburg; capital, £1,500 (private company).
- Quan Kaison and Co., Ltd., Long Road, Newlands Township, Johannesburg; capital, £800 (private company).
- Suliman Ebrahim, Ltd., Eighth and Delarey Streets, Vrededorp, Johannesburg; capital, £1,000 (private company).
- The Auckland Park Racing Club, Ltd., 1, 2 and 3, Ockerse Buildings, 66, Market Street, Johannesburg; capital, £85,000.
- K's Buildings, Ltd., 279, Church Street Central, Pretoria; capital, £1,500 (private company).
- The British Colonial Industries, Ltd., corner of Albert and Polly Streets, Johannesburg; capital, £1,000 (private company).
- Kelly Bros. and Naylor, Ltd., Marathon Street, off Jules Street, Johannesburg; capital, £1,000 (private company).
- Katzenellenbogen, Ltd., 279, Church Street Central, Pretoria; capital, £40,000 (private company).
- Andrew Morkel, Ltd., Railway Coal Siding, Germiston North; capital, £252 (private company).
- The Poorar Estate, Ltd., 10, Pioneer Road, Fordsburg, annex Johannesburg; capital, £1,000 (private company).
- Monk's Garage, Ltd., 84 and 84a, President Street, Johannesburg; capital, £1,000 (private company).
- African Arms and Metal Company, Ltd., 75, Van der Walt Street, Pretoria; capital, £500 (private company).
- Vereeniging Milling Co., Ltd., The Mill Buildings, Woods Reserve, Geduld Township, Geduld No. 24, District Boksburg; capital, £30,000 (private company).
- Sumner and Caddie, Ltd., Marlborough House, corner of Eloff and Commissioner Streets, Johannesburg; capital, £15,000 (private company).
- B. H. Singh, Ltd., 872, First Avenue, Asiatic Bazaar, Germiston; capital, £1,000 (private company).
- Lunat and Company, Ltd., Lunat Buildings, Main Road, Newlands, Johannesburg; capital, £700 (private company).
- Singapore Tea Agency, Ltd., 6, Estate Buildings, Fox Street, Johannesburg; capital, £100 (private company).
- Cafés, Ltd., Shop No. 8, Corporation Buildings, Commissioner Street, Johannesburg; capital, £700 (private company).
- South-West African Trading Co., Ltd., 63, Commissioner Street, Krugersdorp; capital, £4,000 (private company).
- Glória Asbestos Mines, Ltd., Grosvenor Chambers, 36a, Loveday Street, Johannesburg; capital, £5,000.
- W. R. Levin and Company, Ltd., 69 and 60, Sauer's Buildings, 43, Loveday Street, Johannesburg; capital, £2,000 (private company).
- The Kathiwan Estates, Ltd., corner of Trichardt and Kruger Streets, Louis Trichardt; capital, £450 (private company).

### FOREIGN COMPANIES.

- Owen Diamond Prospecting Co., Ltd., care of Thomas Edward Duckles, 83-84, Exploration Buildings, Johannesburg; capital, £1,000.
- Monteolo Diamonds, Ltd., care of Saville Burdett Dowling, 27-28, Bettelheim Buildings, Johannesburg; capital, £45,000.
- Central South African Creameries, Ltd., care of Alexander Algernon Osborn, 19 and 20, New Court Buildings, Market Street, Johannesburg; capital, £50,000.

### SPECIAL AND EXTRAORDINARY RESOLUTIONS.

- Horner and Company, Ltd., Pretoria; liquidation.
- Reserve Investment Co., Ltd., Johannesburg; reduction of capital.
- Standard Trading Co., Ltd., Johannesburg; liquidation.
- G. Rondi, Ltd., Johannesburg; appointment of liquidator.
- United Mineral Water Factories, Pretoria, Ltd., Pretoria; remuneration of directors.
- Istvania Gold Mining Co., Ltd., Johannesburg; liquidation.

The following companies have been placed in voluntary liquidation:—

- Horner and Company, Ltd., Pretoria; capital, £2,345.
- Standard Trading Company, Ltd., Johannesburg; capital, £25,000.
- Istvania Gold Mining Co., Ltd., Johannesburg; capital, £12,000.

### NOTICES OF CHANGE OF ADDRESS.

- Tipperary Tea Rooms, Ltd., 91, Pritchard Street, Johannesburg.
- Ophir Estates, Ltd., 66a, Pim Street, Newtown, Johannesburg.
- Mineral Farnis Syndicate, Ltd., 37, Ginsberg Chambers, corner of Main and Simmonds Streets, Johannesburg.
- Trimble's Detective Agency, Ltd., 32, Wilhelmima Street, Troyeville, Johannesburg.
- Pretoria Oost Eind School Vereeniging Beperkt, "Rozenhof," No. 10, Inezstraat, Pretoria.
- L. Beerstecher, Ltd., 4, Grosvenor Chambers, Loveday Street, Johannesburg.
- The Royalty Theatre, Johannesburg, Ltd. (foreign), care of James Blacklock, 33-34, Standard Bank Chambers, Commissioner Street, Johannesburg.
- Springs Sporting Club, Ltd., Ockerse Buildings, 66, Market Street, Johannesburg.
- Shandon Estates Syndicate, Ltd., Eastern Transvaal Engineering Works, Middelburg, Transvaal.
- Gas Engine Fuel Co., Ltd., 1st Floor, Barsdorf's Buildings, Marshall Street, Johannesburg.
- J. M. Patta, Ltd., 279, Church Street, Pretoria.
- Valley Stores, Ltd., corner of Eighth Street and Broadway, Bezuidenhout Valley, Johannesburg.
- National Investment and Trust Company, Ltd., 83, Permanent Buildings, Harrison Street, Johannesburg.
- M. F. Sherwell, Ltd., 218, Commissioner Street, Johannesburg.



# FOURTEEN BUTTERS' FILTER PLANTS

AND TWO EXTENSIONS TO FORMER PLANTS

now operating on the Rand and giving complete satisfaction to everyone concerned.

Full particulars and operating data will be given on application.

50 lb. samples of slime will be tested free of charge to determine its filtering capacity. Estimates for plants, accompanied by complete general arrangement drawing, supplied on short notice. Write us for pamphlet regarding our process.

## CHAS. BUTTERS & CO., LTD.

(Incorporated in England),

187, Exploration Building, Johannesburg.

P.O. Box 2652.

Telephone 3701.

Cable Address: "HUBNERITE."

## FRASER & CHALMERS, LTD., AGENTS FOR SOUTH AFRICA.



GRANTULLY CASTLE 7,612 TONS.

## Union Castle Line.

Sailings between SOUTH AFRICA and the UNITED KINGDOM by the Western Route, and by the Eastern Route (via Suez).

ROYAL MAIL STEAMERS sail homewards from Durban at daybreak every Sunday, and from Capetown at 1 p.m. every Saturday, calling at Madeira.

MAURITIUS AND REUNION SERVICE.—Sailings at stated intervals.

THROUGH BOOKINGS are arranged to America and Continental ports.

OUTWARD PASSAGES of friends in the United

Kingdom and the Continents of Europe and America, may be prepaid in South Africa.

COMBINED LAND AND SEA TOURS.—In conjunction with the Railway Administrations in South Africa, the Company issues Combined Rail and Steamer Tickets for Circular Tours at REDUCED FARES. Tickets are available for six months, and the journey may be broken at any point.

For full particulars of Freight and Passage Money apply to the Agencies of the

**UNION-CASTLE MAIL STEAMSHIP COMPANY, LTD.,**

AT CAPETOWN, PORT ELIZABETH, EAST LONDON, DURBAN, LOURENCO MARQUES, BEIRA AND JOHANNESBURG, OR TO THE SUB-AGENTS IN THE PRINCIPAL TOWNS.

**South African  
General  
Electric Co.,**

P.O. Box 1905,  
Phone No. 4321,  
JOHANNESBURG.

# THE South African MINING JOURNAL

WITH WHICH IS INCORPORATED  
"The South African Mines, Commerce & Industries."

ESTABLISHED 1891

PUBLISHED EVERY SATURDAY

**South African  
General  
Electric Co.,**

P.O. Box 1905,  
Phone No. 4321,  
JOHANNESBURG.

VOL. XXV. PART II. No. 1295.] JOHANNESBURG, TRANSVAAL, SATURDAY, JULY 22, 1916. [WEEKLY, PRICE 6s.

## DODGE BROTHERS MOTOR CARS

A Record Shipment of this  
Wonderful **CAR** has reached  
Johannesburg. **IMMEDIATE**  
:: DELIVERY can be made ::

### SPECIFICATIONS:

**MOTOR.**—17-24 b.p., 3-point suspension, unit power plant. 4-cylinder cast en bloc, with removable water-cooled head. 98 mm. bore by 114 mm. stroke.

**OILING.**—Eccentric pump, driven by spiral gear on crank shaft.

**COOLING.**—Water. Tubular radiator, capacity 2½ gallons.

**CARBURETTOR.**—Stewart-special design automatic float type.

**IGNITION.**—American-made Elsemann G-4 high-tension, waterproof magneto. Simplified breaker box.

**STARTER.**—12-volt North East single-unit motor-generator. Willard 12-volt storage battery.

**PETROL TANK.**—Round; hung at rear of chassis by forged brackets. Air pressure maintained by mechanical pump driven by cam shaft. Auxiliary air pressure by hand pump on instrument board. Capacity, 12½ gallons.

**CONTROL.**—Levers in centre of car, mounted on transmission case. Control lever on ball pivot with locking device for each speed.

**INSTRUMENT BOARD.**—60-mile speedometer, total and trip mileage recorder driven from gear box. Petrol air pressure pump. Petrol air pressure gauge. Oil pressure gauge. Magneto switch. Current indicator. Lighting switch. Carburettor adjustment. Glove locker and dash lamp.

**GEAR BOX.**—Selective sliding gear type, giving three speeds forward and one reverse. All gears Chrome Vanadium steel, heat-treated.

**CLUTCH.**—Aluminium cone, leather face, specially treated.

**REAR AXLE.**—Full-floating type. Four bevel gear differential. Gears, Chrome Vanadium steel throughout, heat-treated. Eight Timken bearings used.

**SPRINGS.**—Chrome Vanadium steel. Self-lubricating.

**STEERING GEAR.**—Irreversible, on right side of chassis, fitted with 17-inch wheel.

**WHEELS.**—12 Hickory spokes, front and rear. Fitted with Standard Welding Company's demountable rim No. 21. Extra rim furnished.

**TYRES.**—32 x 3½ inch all around—plain tread front. Non-skid tread rear.

**BODIES.**—Five-passenger touring. Two-passenger roadster, pressed steel with special finish.

**COLOUR.**—Ebony black, with dark blue wheels.

**UPHOLSTERY.**—Real grain leather, stuffed with natural curled hair.

**MUD GUARDS.**—Pressed Steel, attractive crowned design. Linoleum covered, aluminium bound running boards.

**WHEELBASE.**—9 feet 2 inches.

**TREAD.**—56 inches.

**WINDSCREEN.**—Clear vision, rain vision, ventilating.

**CAPE HOOD.**—One-man type with Jiffy side curtains and dust cover.

**LAMPS.**—Electric; two headlights with dimmer tail light and dash light.

**EQUIPMENT.**—Electric horn. Rug rail. Foot rail. Number plate holder. Tool kit. Demountable rim mounted on rear.

**SHIPPING WEIGHT.**—Approximately 2,200 pounds.

## GENERAL GARAGE

"MOTOR BLOCK," Marshall St., JOHANNESBURG

P O. Box 1905

Tel. Address: "ELECTRICAL"

Telephone 6181